FIRST LOOK: APPLE'S LATEST P.10
iTunes goes wireless and the Power Mac G5 soars to 2.5GHz.

REVIEWED: OFFICE 2004 P.42
Our productivity pros tell you if it's worth the upgrade.

96

AUG 2004

MacAddict

A BETTER MACHINE. A BETTER MAGAZINE.

4th Annual • All New Tips!

50 BUGS DESTROYED!

We reveal all the nasty bugs **HIDDEN IN YOUR MAC—** and show you how to squish 'em!

DV Cam Face-Off!

Our experts test 10 top camcorders— what we found out will save you money.

REVIEWED!

↓ **LaCie's 1-terabyte Bigger Disk**
→ **The Lord of the Rings: The Return of the King**
→ **Canon PowerShot Pro1 digital camera**
→ **Apple Xserve G5 Dual 2GHz server**
...AND 18 MORE

HOW TO:

→ **Create Stop-Motion Animation** with a Digital Camera
→ **Send Cell-Phone Text** Messages from Your Mac
...AND MORE

$7.99US $9.99CAN

08>

0 71486 01096 8

features

how to

David
Elizabeth
Johnathon Williams

every month

50 **46**
58 **57** **56** **42**

QUICK TIPS
FROM THIS MONTH'S ISSUE

➜ HEAR IT IN iTUNES
To hear an MP3 file play in iTunes rather than in a browser window, replace the URL prefix *http* with *daap*. **From "When Bugs Attack," p18.**

```
●  ●  ●     ...l — bash — 42x6
Last login: Tue Jun  1 15:09:22 on ttyp1
Welcome to Darwin!
rmyslewski:~ rmyslewski$
```

➜ SHELL GAME
Want to try using a new shell in the Terminal? Just type **chsh -s bash**, and the next Terminal window you open will use the bash shell. **From *Ask Us*, p66.**

➜ VIVE LA '80S!
Even without an iPod mini inside, the SportSuit Runabout makes a wicked fashion accessory—just strap one on, and shout out your preferred homage to Billy Idol. **From *Reviews*, p57.**

➜ KEEP IT SMALL
Avoid creating a herky-jerky animation by making small, incremental pose adjustments between shots for fluid motion; make larger, even adjustments to quicken object movement. **From "Create Stop-Motion Animation with a Digital Camera," p74.**

94 Log Out

the disc

Sure, you can download all 186.8MB of Microsoft's Office 2004 test drive from the company's Web site, but even if you have broadband, you'll wait 45 minutes or more—and if you're on dial-up it'll take, oh, forever. So just pop our Disc in your drive and check it out *right now*. With the time you save, you can try out the other 31 apps, games, and timesaving utilities on this month's Disc.

theDisc august2004

Big Bang Chess 1.02

Tired of blood, gore, and hobbits? Try this gorgeous chess game.

Microsoft Office 2004 *test drive*

The 800-pound gorilla of productivity apps just got even bigger—and better.

Combustion 3 *trial*

Move up to the video big leagues with this pro-level effects app.

FUN & GAMES
Battle for Wesnoth 0.7.8
Big Bang Chess 1.02
BZFlag 1.10.6
The Return of the King *trailer 1*
The Return of the King *trailer 2*
Rainbow Six 3 Raven Shield *trailer*
SuperTux 0.1.1

GRAPHICS & MULTIMEDIA
Blender 2.33a
Combustion 3 *trial*
freePhotoConverter 2.4.1
My Photo Album 4.2.1
SketchUp 3.1.32 *trial*
Toon Boom Studio 2.5 *demo*
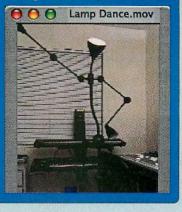
INTERNET & COMMUNICATION
AuctionSieve 1.3.23
BumperCar 1.0 *demo*
Cyberduck 2.3
FoldingObserver 1.0
HTTP Mail Plugin 1.37
IYML 2.1
Safari Menu 1.8.1
Shiira 0.9.2
Transmit 2.6.2

PRODUCTIVITY
Event Reminder 2.1.1
InCopy CS 3.0.1 *trial*
Office 2004 *test drive*

UTILITIES
AddressBook SMS Scripts 1.10
Carbon Copy Cloner 2.3
Cocktail 3.4.9
DiskTracker (Classic) 2.3
DiskTracker (OS X) 2.3
Font Viewer 4.7
XBattery 0.7.0

Staff Video: Lamp Dance

Turn to page 74 and learn how to create a stop-motion animation using only a digital camera and iLife. Then check out the animation created by Senior Editor Kris Fong on this month's Disc.

Lamp Dance.mov

UPGRADE
If you don't receive the Disc with your copy of *MacAddict,* you might want to consider upgrading. Each monthly disc contains cool demos, useful shareware and freeware, and the inimitable MacAddict Staff Video. To get 12 issues of *MacAddict* that include this value-packed disc with your subscription (prorated if necessary) for just $1 more per issue, call 888-771-6222—the operator will take care of everything.

The Brainy Bunch

For the fourth year in a row, August is *MacAddict*'s Bugs Month—the issue in which we provide relief from 50 of the nastiest, gnarliest, nerve-wrackingest annoyances that infest our beloved Macs. If you and your Mac aren't seeing eye-to-eye, this year's compendium of bug-squishing tips might just reinvigorate your relationship.

Our bug-busting advice is gleaned from a wide variety of sources, such as online forums, user-group meetings, and casual discussions on expo floors. Or from emails sent to letters@macaddict.com.

Each day I receive a deluge of email—and I read every message. Sprinkled among them are tips 'n' tricks I wouldn't have learned any other way. For example, it was news to me—but not, apparently, to reader Garrick Chow—that I could print a list of a folder's contents by simply dragging the little folder icon at the top of a Finder window to the Printer Setup Utility's Dock icon. Works like a charm—thanks, Garrick!

From Brandon Sherman I learned a nifty little time-saver: Click and hold the icon of a file, folder, or application, then hold down the Option and Command keys. Now, when you drag the icon, your cursor will turn into a small curved arrow. Release your mouse—still holding down the Option and Command keys—and you'll discover that you've created an alias wherever

Thanks to all of you who share your smarts.

you dragged the icon to, and that the original item is back where you first selected it. As I said, nifty.

On a more off-the-wall but mighty useful level, Butch Kimmel suggests that Kensington's two-button Orbit trackball ($29.99, www.kensington.com) is "the perfect foot pedal for GarageBand." Just assign one button to the up arrow, the other to the down arrow, and a two-button chord to the standard click. He claims his trackball–foot pedal is great for cycling through effects presets without having to take his hands off his guitar.

Some of your tips aren't tips per se, but friendly pointers to way-cool stuff. Nathan Crockett, for example, introduced me to www.google.com/intl/xx-piglatin/, and Alex White suggested that I type *the answer to life the universe and everything* in Google's search field. Thanks to them—and to all of you who share your smarts.

One last note: You'll notice that Senior Editor Narasu Rebbapragada no longer graces our *Staff Rants* column. She made me promise not to tell you where she's going—but she didn't say I couldn't hint. So remember that she loves both magazines and computers, and start searching mastheads.

Enjoy,

Rik

STAFF RANTS

Q. Got a favorite hot tip?

John Poultney MAN OF TOMORROW
Got a favorite hot tip?
When lighting candles on a birthday cake, always light the ones farthest from you first, so you don't burn your wrist reaching over the lit ones. Also, to block pop-ups in Safari, just select Safari > Block Pop-Up Windows. Command-K also works.

Mark Rosenthal P. SOUP
Got a favorite hot tip?
Get this: The letters on a typical Apple keyboard, arranged in various combinations, can spell almost anything! Why, new arrangements are invented every day! Here's a funny one I made up just last Tuesday: S-L-O-B-B-E-R. Neat, huh?

Kris Fong TIPSY
Got a favorite hot tip?
My 40-watt Weller 3140 soldering iron—its precision tip is perfect for soldering guitar wiring. Oh, a Mac tip? In Safari, choose Safari > Reset Safari to obliterate your unscrupulous surf-and-search evidence (especially useful if you've been Googling porn on your significant other's Mac).

Peter Marshutz FISH FRYER
Got a favorite hot tip?
Tired of smelling up the house when cooking fish? Then fire up a George Foreman Grill—it's not just for meat anymore. Your fish will be grilled to perfection in minutes without that nasty smell. Or there's always Glade.

Niko Coucouvanis CANADIEN HONORIFIQUE
Got a favorite hot tip?
The best way to eat apple pie is with a nice greasy gob of cheddar cheese melting on top of it. Also, those business card–size CDs do not play well with slot-loading CD drives.

Noah Tsutsui 802.11G SLAVE
Got a favorite hot tip?
When you just can't make the DSL bill, you can access unsecured hotspots from most McDonald's and Starbucks locations, or outside the offices of your local corporate conglomerate!

Jenifer Morgan ORAL HYGIENIST
Got a favorite hot tip?
Avoid putting money where your mouth is—god only knows where it's been.

Max ORGANIZATIONALIST
Got a favorite hot tip?
Put aliases to your most-used apps in a folder, then drag that folder to your Dock—instead of a bunch of icons cluttering your Dock, you'll be able to click and hold the folder icon and pick the app you want from the list that appears. Oh, and chopsticks make quick 'n' easy trivets.
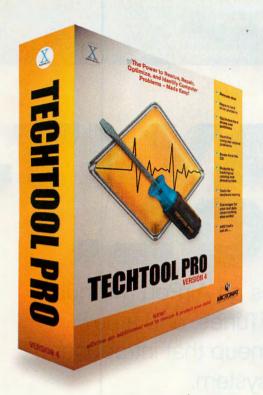
comingsoon:september2004

Here's what our editors are preparing for the next issue of *MacAddict*.

Steve is about to take the wraps off **Tiger—the next version of Mac OS X**—and we'll be there. We'll also poke and prod a passel of **budget-priced photo printers,** and challenge you to take our **third annual Geek Quiz.** We'll show you how to **import footage from a DVD** into an iMovie project, **build an app** using Apple's free Developer Tools, and get **fine art and novelty prints** from your inkjet printer. Finally, we'll take **DVD Studio Pro 3** for a spin, fondle **two of the latest Palms,** and play with the fattest video card ever created for the Mac, **ATI's 256MB Radeon 9800 Pro for Mac Special Edition.**

PLAY IT. COOL.

Apple announces an AirPort minihub, AirPort-enabled iTunes, and a new Power Mac G5 lineup that introduces a liquid cooling system.

How jaded have we become? So much so that when Apple announced a portable, audio-enabled AirPort minihub with iTunes support, and a 500MHz speed increase in its top-of-the-line Power Mac G5, our first thoughts were of the challenges now faced by makers of wireless music-streaming hardware such as Slim Devices' Squeezebox ($279, www.slimdevices.com), Macsense's HomePod ($249, www.macsense.com), and Roku's SoundBridge ($249.99 and $499.99, www.rokulabs.com), and of the fact that when Steve Jobs announced the Power Mac G5 back in June 2003, he said that a *3GHz* version would be available in 12 months. Who said that life was fair?

AIRPORT EXPRESS

Apple's new AirPort minihub, the $129 AirPort Express, is designed for portability. At 3.7 by 2.95 by 1.12 inches, and weighing in at 6.7 ounces, it's about the same size and weight as a 40GB iPod—a perfect traveling companion for your iBook or PowerBook, should you want to take wireless connectivity with you on the road. It's also designed to be as easy to use as any Apple product: Just plug it into an AC wall socket and wait a moment—its LED indicator glows yellow as it searches for an AirPort connection (Extreme or plain-vanilla). When the LED turns green, you're connected—along with up to ten fellow wireless users, Mac or PC. Rendezvous instant-networking technology is a wonderful thing.

While a pocket-size, no-brainer AirPort connection is cool in and of itself, it's the AirPort Express's iTunes connectivity that elevates it to awesome status. On the bottom of the unit are three ports: 10/100Base-T Ethernet (for network or broadband connections), USB (for connecting a USB printer), and 3.5mm mini-audio (analog and digital)—and that mini-audio port is where the fun starts. Plug your home stereo or powered speakers into that port, and play your iTunes tunes either wirelessly or over your wired network.

While the AirPort Express makes it easy and affordable to pipe music

The Dual 2.5GHz Power Mac gives new meaning to the word *cool*.

into every room in your home, it does lack some features enjoyed by users of other wireless music streamers. For one, there's no remote—you control your music selections, EQ, and volume solely through iTunes or your sound system. There's also no LED or LCD panel to give you information on what song is playing—but hey, the AirPort Express is only $129. You get what you pay for.

AIRTUNES

To get your music from iTunes to the AirPort Express, Apple has developed a new music-networking technology called AirTunes. Built into iTunes 4.6, AirTunes detects sound systems connected to as many AirPort Express units as you have on your network, and displays them in a drop-down menu in the lower-right corner of the iTunes window—just choose the system to which you want to send your music, and AirTunes takes care of business. It sends music using Apple's lossless compression codec, and also encodes it to prevent theft by any nefarious Wi-Fi or AirPort users in the vicinity of your wireless network. Like the AirPort Express, AirTunes is designed for both Mac and PC use.

POWER MAC G5

Apple also announced a revamped Power Mac G5 line. At the top of the heap is a $2,999 Dual 2.5GHz model that features a new liquid cooling system to aid in heat dissipation—without increasing fan noise (or so Apple claims). This cooling system works much like the radiator in your car: Liquid circulates between chambers in contact with the PowerPC microprocessors and a cooling chamber through which the Power Mac G5's cooling fans waft air. Liquid cooling schemes have been used in PCs for years, but mostly as aftermarket add-ons—Apple is the first major desktop-system manufacturer to take the plunge.

Also new is the ATI Radeon 9600 XT 128MB graphics card in the 2.5GHz dualie, and—across the line—a SuperDrive that burns at 8X. A dual 2GHz unit for $2,499 and a dual 1.8GHz unit for $1,999 also join the lineup. The low-end version has three PCI slots; the two faster models have PCI-X. Also, the low-end model maxes out at 4GB of RAM, while the fast guys can fit 8GB.

So what happened to Steve Jobs's promise of 3GHz machines? Simply put, it didn't happen. IBM—the manufacturer of the PowerPC chip that runs the Power Mac G5—has had more difficulty than anticipated reaching 3GHz. According to an Apple spokesperson, 3GHz Power Mac G5s aren't likely to appear until next year. Sigh.—*Rik Myslewski*

NEW **STUFF**

Edirol unveils a new pro audio FireWire interface.

▶ MACHO MUSIC BOX
Edirol FA-101 FireWire Audio Interface
$695, www.edirol.com
Available: Now

This single half-rack FireWire audio interface can record and play back ten channels of 24-bit, 96kHz audio or six channels of 24-bit, 192kHz audio. Ports include 1/4-inch, TRS-balanced inputs and outputs, front-mounted S/PDIF optical ports, a built-in MIDI interface, and two microphone preamps that can accept XLR and 1/4-inch inputs.

▶ MIC CHECK
MacMice MicFlex
$49.99, www.macmice.com
Available: Now

Listen up, iChat audio chatters and GarageBand vocalists: This stand-up USB microphone might be just what you need. This stylish mic adjusts to reach heights up to 18 inches from the base and records CD-quality audio.

Sing it in style with MacMice's USB Mic.

▶ VGA TO ADC
Dr. Bott VGAtor
$299.95, www.drbott.com
Available: Now

If you're a PowerBook or iBook owner constrained by your machine's VGA-only display limitation, check out the VGAtor, a pricey silver box that connects an Apple ADC display to your 'Book's VGA port. Be sure to check www.vgator.com for compatibility information regarding your particular model of 'Book—iBooks and older PowerBook models have some color and resolution limitations.

▶ NEW PALM PDAS
PalmOne Zire 72 and Zire 31
$299 (Zire 72) and $149 (Zire 31)
www.palmone.com/us
Available: Now

Palm's Zire 31 is an affordable color PDA.

Shortly after it discontinued Mac software development, Palm announced two new Mac-compatible consumer PDAs. The Zire 72 comes with 32MB of onboard memory, a 320-by-320-pixel color display, a built-in digital camera, Bluetooth wireless connectivity, a 1.2-megapixel camera, an MP3 player, an expansion slot, and the ability to capture and play video. The budget-conscious Zire 31 offers 16MB of memory, a 160-by-160-pixel color display, an expansion slot, an MP3 player, and a photo viewer.

Bluetooth, camera, video—the Zire 72 is loaded.

DROOL**WORTHY**
Sexy Stuff We Can't Wait to Get Our Mitts On

USB Swiss Army Knife →

The **Swissmemory USB Victorinox**
(www.swissbit.com) updates the familiar do-it-all
pocket pal with a stainless steel knife, scissors,
file, screwdriver, pen, red LED laser pointer, and
your choice of 64MB (€59 or about $70) or 128MB
(€72 or about $85) flash drives. An airport-safe
version comes with only the pen, laser pointer,
and flash drive, in both the 64MB (€55 or about
$65) and 128MB (€66 or about $79) sizes.—NR

USB Ballpoint Pen →

Peripheral Enhancements' new **DiskGo USB Flash
Drive Plus Ink Pen** ($90 street, www.edgememory.
com) wraps a rather awkward name around a
graceful concept. This silver ballpoint pen with
cushioned grip houses a 256MB USB 2.0 flash
driver in the pen's top. The pen is also available
with 32MB ($40 street) and 128MB
($60 street) flash drives.—NR

FIVE **TIPS**

THE 411 ON PRINTING AND FAXING

You've printed and faxed every day for the past decade, so you know all there is to know on the subject, right? Wrong. Check out these tips on printing and faxing in Mac OS 10.3 from *The Macintosh Panther Bible,* ninth edition, by Cliff Colby and Cheryl England (2004, Peachpit Press).—*NR*

1 **Faxing and Phoning (Panther only)** If you use the same phone line to receive both incoming faxes to your Mac and phone calls, go to System Preferences > Print & Fax > Faxing. In the When A Fax Arrives: Answer After *number* Rings field, choose a number lower than the number of rings before your answering machine picks up. That way your Mac will receive the fax before your phone kicks in.

Set your Mac fax to pick up before your answering machine does.

2 **US Letter versus Letter (Small)** Some applications, such as Microsoft Word 2004, give you the option of choosing either US Letter or Letter (Small) in the Page Setup dialog, but list them both as measuring 8.5 by 11 inches. Here's the difference: US Letter tells the printer to use as much of the paper as it possibly can, whereas Letter (Small) tells the printer to leave a 1/2-inch margin around the edge of the paper.

Letter (Small) gives you larger margins than US Letter.

3 **Soft Proof (Panther only)** By default, clicking the Preview button in an application's Print dialog launches the Mac's Preview application. At the bottom of the Preview window is a check box labeled Soft Proof. When it's checked, Preview shows you an approximation of what you would see if you printed your file using the printer selected in the Print dialog—useful if you're printing a color file to a monochrome printer.

Check this box to preview exactly what your printer will spit out.

4 **Page Setup's Reach** Changes you make in an application's Page Setup dialog affect only the currently active document—with one notable exception. Most changes made in a Web browser's Page Setup dialog affect all browser windows and remain in effect until you quit the browser.

Your browser's Page Setup dialog affects all browser windows.

5 **Your True Margins** To test your printer's true print size, create a document with a 0 (zero) margin for all sides of the page. Next, type four lines of repeating numbers (01234567890123...) across the top and bottom, and print the page after choosing the paper setting in the Page Setup dialog with the largest coverage (see tip 2) to see your printer's true maximum margin.

Create this document to test your printer's true margin limitations.

SHAREWARE **PICK OF THE MONTH**

ON THE DISC
AuctionSieve 1.2.23
freeware

AuctionSieve   www.auctionsieve.com   Free

This eBay search tool lets you quickly wade through millions of badly titled and poorly described auction items to find the bargain of your dreams. Enter a search phrase, and AuctionSieve spits back a hefty list of results. To narrow down the list, use the Catch Words feature to group together similar descriptions—for example, in a search for PowerBooks you could group all items containing the word *Titanium*—then use the Trash Words feature to filter out descriptors you don't want, such as *Lombard* or *Wallstreet*.

AuctionSieve helps you find the best deals on eBay.
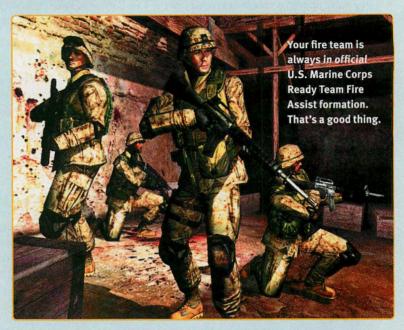
MACSOFT AND MARINES DEVELOP HYPERREALISTIC WAR GAMES

Active-duty U.S. Marines collaborated with MacSoft to develop a modern warfare game so real that the military will use it for training. A team-based first-person shooter, Close Combat: First to Fight enlists you as a Marine fire-team leader. As the tactician of a four-man team, you fight and command your way through Middle Eastern battlegrounds. There are two modes of play: Normal and Simulation—the latter puts you in real-world war conditions.

Scheduled for release in 2005, Close Combat: Red Phoenix, based on Larry Bond's novel *Red Phoenix,* will put real-time strategy players in command of a reinforced rifle platoon of U.S. Marines or South Korean soldiers fighting against a North Korean invasion.—*Matt Osborn and Narasu Rebbapragada*

Close Combat: First to Fight **Close Combat: Red Phoenix**	
Price	TBA
Available	Q4 2004 (First to Fight) Q1 2005 (Red Phoenix)
MacSoft www.macsoftgames.com	

Your fire team is always *in official* U.S. Marine Corps Ready Team Fire Assist formation. That's a good thing.

FIRST LOOK: WORLD OF WARCRAFT

Imagine a world where thousands of players form friendships, slay monsters, and embark on adventures that span a few hours or several weeks. This is the World of WarCraft, the latest craze in MMORPGs (massively multiplayer online role-playing games).

Kill monsters, bust ghosts, or help a talking dismembered head find its body. Explore new areas to gain experience and skill points, and check out World of WarCraft's beautifully designed quests. Unlike the game EverQuest, in which even short quests can last hours or days, some World of WarCraft quests are designed so that you can play them in short spurts. Also, if you start a quest and get tired of it, you can go find a new quest without quitting the old one. Currently in beta, World of WarCraft gameplay is already well polished. The interface is simple and gameplay is instantly rewarding. Blizzard hasn't yet announced a release date or monthly fee.—*MO*

World of WarCraft	
Price	TBA
Available	TBA
www.blizzard.com www.worldwarcraft.com	

Unlock flying routes, then buy tickets to fly between towns—this Undead Mage has a one-way ticket to the Undercity on Bat Airways.

This Gnome Warlock is a cutie until she summons her pet demon.

STAR WARS: KNIGHTS OF THE OLD REPUBLIC— DO YOU LIKE YOUR ROLE-PLAYING LIGHT OR DARK?

Four thousand years before Obi-Wan and Darth Vader clashed, Jedi Knights numbered in the thousands and butted heads with the Sith—an ancient order well versed in the Force and set on destroying the Jedi and the Republic. You enter this role-playing adventure as a young Jedi with the power to make or break this interplanetary war. Will you follow the path of a Jedi or turn toward the Dark Side? Poke your lightsaber around seven worlds, including Tatooine and Kashyyyk (Chewbacca's 'hood), and check out the customizable characters and minigames.—*MO*

Star Wars: Knights of the Old Republic	
Price	$49.99
Available	August 2004
Aspyr Media www.aspyr.com	

An Aspyr spokesperson confirmed that the latest *Star Wars* game will be Jar-Jar free.

Where do you want to take your music?

Michael "Fish" Herring on tour with Christina Aguilera | on the tour bus | 11.12.03

photo: Anya Kron

Studiophile DX4
professional desktop audio monitoring system

Nova
large-capsule studio condenser microphone

MobilePre USB
USB bus-powered preamp and audio interface

Keystation 49e
49-key USB MIDI controller

MacUser
Editor's Choice Award
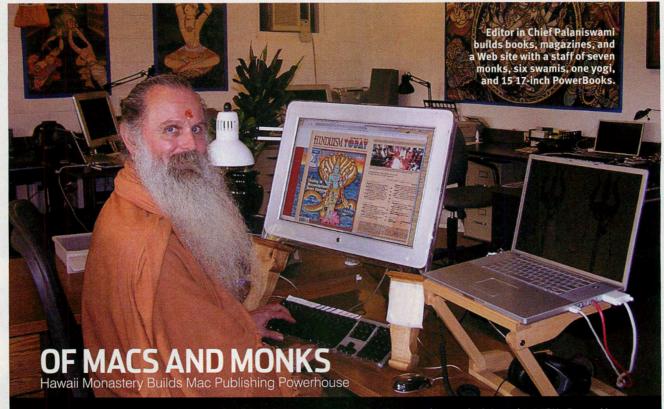
ProSessions
top-quality loops and grooves

Pros rely on software and M-Audio gear to make music on their computers anywhere, anytime. Now, Apple GarageBand puts that same power within your reach. Just add affordable M-Audio hardware like one of our high-resolution audio interfaces and your computer becomes a complete studio capable of everything from jamming by yourself to recording entire CDs. Take your music to the next level at your local M-Audio dealer or Apple retailer today.

M-AUDIO

audio/MIDI interfaces | USB MIDI controllers | studio monitors | microphones | preamps | sound libraries | music software | www.m-audio.com

Editor in Chief Palaniswami builds books, magazines, and a Web site with a staff of seven monks, six swamis, one yogi, and 15 17-inch PowerBooks.

OF MACS AND MONKS
Hawaii Monastery Builds Mac Publishing Powerhouse

In 1986, one of the first-ever—if not *the* first—Mac-based publications networks emerged in an unexpected place: a Hindu monastery on the island of Kauai in Hawaii. It's here that a 14-person team, equipped solely with Macs, produces an elegant quarterly publication, *Hinduism Today* (www.hinduismtoday.com), and its companion Web site. The offices house a dual 1GHz Xserve running Mac OS X Server, along with a RAIDking 600-R 12-bay 1.5-terabyte RAID 5 array (www.raidking.com) that connects 15 17-inch 1GHz

PowerBooks and several 1GHz and 1.25GHz Power Macs via an HP ProCurve Gigabit Ethernet network and AirPort Extreme. Each PowerBook and tower has a 23-inch Cinema Display, some with custom-designed wooden monitor stands.

Why the Mac? Editor in Chief Paramacharya Palaniswami says, "Our guru sat down with the first Mac and said, 'This is the future for us.' We sold our Quadritek phototypesetters and bought Macs. In the decades since then, it has proven to be the most problem-free tool we have found."—*JM*

RUBBER DUCKY, USB'S THE ONE...

Send your rubber ducky to TikiMac (www.tikimac.com), and this Denver, Colorado, company's Upgrade-A-Duck service will turn it into a 128MB ($59.99), 256MB ($72.99), or 512MB ($139.99) USB 2.0 Bionic Duckie Flash Drive. Warning: Customizing your pal also demonizes it, with light-up LED eyes that function as read and write indicators.

Turn your bath-time friend into a devilish USB drive.

HD OVER FIREWIRE
Panasonic and Apple have announced technology that brings high-definition (HD) video to your Mac over FireWire from video-editing hardware such as Panasonic's AJ-HD1200A VTR deck ($21,000, www.panasonic.com)—and in the rarefied air of HD editing, that's considered affordable. This development lets video producers and editors transfer compressed DVCPRO HD-encoded video directly from the deck to the Mac for real-time editing in the newly revved Final Cut Pro HD ($999, www.apple.com).

BATTLEFIELD 1942

In Stores Now. Order now at www.aspyr.com

Combat in 4 Theatres: South Pacific, North Africa, & Eastern and Western Europe.

Wage war with up to 64 players!

Command over 35 devastating vehicles.

Wield over 20 authentic Allied & Axis weapons.

Includes the Expansion Pack, Battlefield 1942™: The Road To Rome

When Bugs Attack

50 New Bugs and How to Squash Them
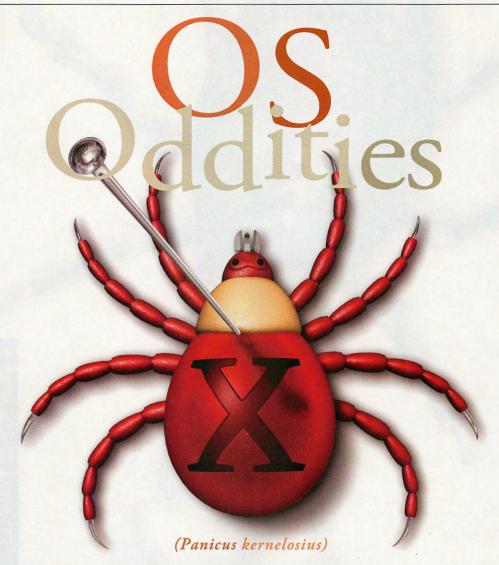
By Dave Hamilton
Illustrations by Oliver Wolfson

S ummer means bugs—and this year, we're talking hordes. Luckily, it's time for our yearly bug roundup. As in our prior three annual installments, we define *bug* as "anything that doesn't work exactly the way we want it to." This way, we get to indulge our überpicky selves while you benefit.

This year we're aiming our bug spray at Mac OS X itself—operating-system quirks,

Helpful Bug Finder

GEEK ALERT!

These bug fixes are for geeks—and we mean that as a compliment.

QUICK FIX

Just because these fixes are fast and easy doesn't mean they're not valuable.

networking wackiness, OS X's built-in applications, and the evils infecting the hardware upon which it runs. Some bugs are juicy, Texas-size beasties while others are simply tiny gnats that annoy us to no end, causing little real harm but leaving crusty, itchy welts. Either way, we'll help you squash 'em. So saddle up, partner—we're going bug hunting!

OS Oddities

(Panicus kernelosius)

We all agree that Mac OS X is the best operating system on the planet, but that doesn't mean it's foible-free. From missing features to stuff that plain doesn't work, we've all encountered problems that drive us crazy.

1. I Want to Print My Fonts

PROBLEM: Using Font Book, I can view all the characters of a font, but I can't find a way to print out a page displaying the type samples. I use lots of fonts, and printing sample pages would be helpful—especially for picture and icon fonts.

SOLUTION: Thankfully, the shareware army is ready to help. AlphaOmega Software's Font Viewer ($15, http://alphaomega.software.free.fr/fontviewer/Font%20Viewer.html) can display all your fonts and print them out for you, one line per typeface. (We've had good results with Font Viewer in both Jaguar and Panther.)

Font Viewer can print out a list of all your fonts so you can see examples of each typeface.
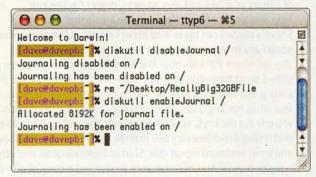
2. Log Files Are Devouring My Disk Space

PROBLEM: OK, I have a big problem—and I mean *seriously* big. There was a crazy time when my Mac hated my old joystick and wrote a complaint about it to a log file every second; this resulted in one of my log files bloating up to over 32GB in size. I want that space back, but every time I try to delete the file—either from the Terminal or from the Finder—my Mac freezes up with a kernel panic. I've even tried deleting the file from the bleak environs of single-user mode (OK, so I'm a geek), but have had no luck. Am I destined to live without that chunk of my drive?

**SOLUTION:** This is an odd problem indeed. It could happen to any of us, however, because it exploits a known bug in the OS. In Mac OS X Panther, Apple enables a hard-disk feature called *journaling*. Journaling means your Mac keeps a log of everything it does in multiple files ending in .log. Ostensibly, this leads to faster startups—in the event that your Mac gets inadvertently shut down or rebooted without going through the proper steps, it no longer has to do a file system check. Instead, it simply replays the journal and gets back up and running fast. This comes at a small price—you can't delete those humongous .log files using standard Finder methods. However, journaling is easy to turn off—the simplest method is to use the Terminal.

1. Open up the Terminal and type **diskutil disableJournal /**.
2. Use the rm command to delete the offending file. Type **rm /** followed by the path to the name of the file you wish to delete (for example, Library/Logs/DirectoryService/DirectoryService.server.log).
3. Finally, reenable journaling by typing **diskutil enableJournal /**.

```
Terminal — ttyp6 — ⌘5
Welcome to Darwin!
[dave@davepb:~]% diskutil disableJournal /
Journaling disabled on /
Journaling has been disabled on /
[dave@davepb:~]% rm ~/Desktop/ReallyBig32GBFile
[dave@davepb:~]% diskutil enableJournal /
Allocated 8192K for journal file.
Journaling has been enabled on /
[dave@davepb:~]%
```

If your Mac kernel panics every time you try to delete a large file, try disabling journaling before deleting it.

3. I Want to Save Software Updates

PROBLEM: Can you tell me where on my hard drive my system downloads updates so that I don't have to download duplicates for all my Macs?

SOLUTION: When you click Software Update's Install *number* Items button, it downloads a software package, installs the software, and then deletes the package, leaving nothing behind except a receipt saying it's done. Change this behavior by selecting

Tell Software Update to keep packages around so you can use them to update multiple Macs.

the appropriate update in Software Update, and then choosing Update > Install And Keep Package. Your Mac will ask you for your password. Type it in to download and start installation. When it's finished, you'll see an open Finder-folder window named Packages that contains—you guessed it—the package, ready for you to copy to your other machines. Should you need the Packages folder later, you can find it in Library > Packages on your boot drive.

4. My Recent Items List Is Incomplete

PROBLEM: Certain applications and documents don't appear in my Apple menu's Recent Items list no matter how many times I launch or open them.

SOLUTION: Generally, Recent Items contains only things you've opened via Apple-originated methods, such as the Finder, Apple-built apps, and dialogs that Apple controls (including the File > Open dialog in most apps). However, if you use a third-party application's internal method of opening a document, such as Word's own recently used files list, it won't appear there.

5. My Icons Insist on Piling Up

PROBLEM: In Panther, every time I mount a drive, volume, or CD, or save files to my desktop, the resulting icons appear in the lower-right corner of my screen and start stacking up on top of each other. How do I stop this?

SOLUTION: Near as we can tell, this is a bona fide Panther bug. It can happen when your Mac is connected to a large display or multiple monitors, and we haven't been able to squash it. But there's a workaround. In the Finder, click the Desktop, go to View > Show View Options, and select the check box next to Keep Arranged By. You can choose anything from the drop-down menu as long as that check box is marked. This bypasses the problem.

Make icons arrange themselves so they don't stack up in the desktop's lower-right corner.

6. My Finder Settings Won't Stick

GEEK ALERT!

PROBLEM: I still can't get my Mac to always display column view when I double-click my hard-drive icon. I *can* set it to column view, but when I restart my Mac, it reverts to icon view. What am I doing wrong?

SOLUTION: In last year's bug-squash fest (see "50 Biggest Mac Bugs and How to Kill 'Em," Aug/03, p16), we discussed how to open a folder, change its view to your liking, and then immediately close it as a method of setting a default view for any given folder or drive. But there are times when this doesn't work—specifically when the settings file for that folder or drive is damaged. Settings are stored in .DS_Store files, which reside in nearly every folder on your Mac (ones you've opened in the Finder). The best way to reset the .DS_Store file on the root of your Mac's boot drive is to delete it and let the Finder create a new one for you. To do this, open the Terminal, type `rm /.DS_Store`, and press Return. Use the same command but add a path name to reset other folders or drives—you can reset your Documents folder, for example, by typing `rm user name/Documents/.DS_Store`. From there, reopen those folders or drives and set them to display however you want.

```
Welcome to Darwin!
[dave@daveph:~]% rm /.DS_Store
[dave@daveph:~]%
```

Delete .DS_Store files to reset folder or drive settings.

7. My Mac Is Sooooo Sluggish

PROBLEM: My Mac is running very slowly. What can I do to give it a goose?

SOLUTION: Here are a few things you should do on a semiregular basis to keep your Mac in tune.

1. Repair Permissions. Mac OS X's Unix framework uses a complex *permissions* system to control access to all the files and folders on your hard drive—including ones used by Mac OS X itself. When any permissions are out of whack, your Mac's performance can suffer, so it's wise to repair them once a month. To do so, launch Disk Utility (Applications > Utilities), select your startup volume, click the First Aid tab, then click Repair Permissions.

2. Clean Your Caches. Mac OS X is one efficient beast, keeping copies of things it regularly uses so as to save you time in the long run. But these copies can pile up and cause the *opposite* to happen. Cleaning out the contents of Library > Caches and *user name* > Library > Caches can help restore your Mac's zippiness. Be aware that deleting Safari's caches can make Web access slower at first, since you're deleting information it uses to speed you to frequently visited Web sites.

3. Reset Your PRAM. Your Mac stores most of its settings in preference files, but some info is stored on a chip inside your Mac called the PRAM (parameter RAM). If your Mac is acting woozy, setting this chip back to its factory defaults can clear its head. To reset the PRAM, restart your Mac while holding down the Command-Option-P-R key combo. The reboot chime will replay until you release the keys, at which point your Mac will start normally. Most veteran Mac addicts agree that letting the chime play two or three times is plenty. You may need to reset your Mac's date and time, keyboard repeat rate, Startup Disk selection, and other preferences stored in PRAM.

To make regular Mac maintenance easier, get a copy of one of our favorite shareware apps, Cocktail ($9.95, www.macosxcocktail.com), which lets you perform maintenance via a single, clean interface. Unlike fallible humans, Cocktail won't accidentally remove the wrong files or make other mistakes—it's well worth ten bucks.

Cocktail is an essential utility to have around—just click a button to keep your Mac in line.

8. I Can't Mount Disk Images

PROBLEM: Since I updated Panther, disk images don't mount. Double-clicking them does nothing whatsoever.

SOLUTION: We've seen this happen as well. Go to System > Library and delete the file Extension.kextcache, and then delete the com.apple.kernelcaches folder located in System > Library > Caches. Restart your Mac, and it will re-create that file and folder, and hopefully restore your ability to mount disk images.

9. Can I Speed Up Update Optimization?

PROBLEM: Every time I perform a system update on my Mac, the final step—optimizing—seems to take forever. Is there anything I can do to speed it up?

SOLUTION: During this phase, the little Aqua-infused progress bar in the Install Mac OS X Update dialog consumes precious processor time. Minimize this dialog by clicking the little yellow widget in the title bar, and the optimization will complete much faster.

Who would have thought that eye candy could be such a time sink?

QUICK FIX

10. My Command Key Stopped Working

PROBLEM: Sometimes when I'm working, my Command-key shortcuts stop working. Command-Q won't quit an app, Command-W won't close a window, Command-V won't paste—none of them work. Then, suddenly, they work again as if nothing ever happened. What's going on?

SOLUTION: We've seen this wacky issue in Mac OS 10.2 and later. Sometimes you can restore Command-key functions by simply clicking a menu that contains Command-key shortcuts—for example, the Finder's File menu. But there are times when that *won't* work. Instead of rebooting, which always seems to help but takes a while, relaunch the Finder. In the Apple menu, choose Force Quit, Finder, and then Relaunch. This takes only 10 seconds or so and has always solved the problem for us.
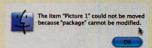
Use the Force Quit dialog to relaunch the Finder and bring your Command key back to its senses.

11. I Can't Upload Files in Mac OS X's FTP

PROBLEM: I just got space for my own personal Web site on my local ISP's server. My ISP tells me to use FTP to send my files to it to update my Web pages. I can open up my Web site via FTP in the Finder, but I can't upload—I get a message saying the FTP server can't be modified.

SOLUTION: Despite the fact that Apple has included FTP capabilities in Mac OS X (in the Finder, go to Go > Connect To Server, and type *ftp://server name/com* into the Server Address field), as of this writing it still doesn't support uploads. You can copy files to your Mac as often as you wish, but you can't use OS X's FTP power to make any changes on the server. To do that, you need third-party FTP software, such as Transmit 2 from Panic Software ($24.95, www.panic.com).

The item "Picture 1" could not be moved because "package" cannot be modified.

Mac OS X's Finder supports FTP—but only for downloads. For uploads, you need third-party FTP software.
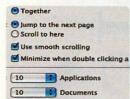
12. Scrolling Ain't Smooth

PROBLEM: Since my Panther upgrade, moving through documents is jerky when I use my mouse's scroll wheel. Can I fix this?

SOLUTION: Yes, you can—in fact, Apple now has an option for it. Go to System Preferences > Appearance and check the Use Smooth Scrolling check box. While this makes scrolling less jerky with many—not all—mice, it does so at the expense of scroll speed.

Enable smooth scrolling to mellow your mouse.

Together
Jump to the next page
Scroll to here
☑ Use smooth scrolling
☑ Minimize when double clicking a
10 — Applications
10 — Documents

13. I Want a Faster Way to Rename Files

QUICK FIX

PROBLEM: When I want to rename a file or folder, I click it, wait a moment, and then click again to select the text so I can type over it. Is there a faster way?

SOLUTION: Just select the file or folder, press Return, and immediately begin typing a new name.

14. I Want My Desktop Printers Back

QUICK FIX

PROBLEM: In Mac OS 9, all my printers appeared on the desktop. I could drag documents to them to print, or click them to view their print queues. In Mac OS X, they don't appear—can I get them back?

SOLUTION: Easily. Open Applications > Utilities > Printer Setup Utility, highlight your printer, go to the Printers menu, and choose Create Desktop Printer. Select a save location (the default is the Desktop), and click Save. The printer will behave just as it did in Mac OS 9. Double-clicking the printer will reveal its queue and settings, and dragging documents to it will print them.

15. I Can't Use a New Font

PROBLEM: I just added a new version of the Garamond font to my Mac, but OS X is still showing me the old font.

SOLUTION: Mac OS X has a font-pecking order, so an older font in a higher-priority location can trump a new one. It's best to have only one copy of each font. Here's the priority, from highest to lowest:
> *user name* > Library > Fonts
> Library > Fonts
> Network > Library > Fonts
> System > Library > Fonts
> System Folder > Fonts (Mac OS 9's Fonts folder)

Try to store all of your fonts in one place. Picking a location is tricky—adding everything to *user name* > Library > Fonts makes it easy to migrate fonts (they'll accompany your user folder), but they're unavailable to anyone else. For multiple users, the best storage place is Library > Fonts, since everyone has access. System > Library > Fonts is best left alone—let OS X keep its stuff in there.

16. At Startup, My Mac Just Flashes a World Icon

PROBLEM: After updating OS X, my Mac just sat at the main startup screen, flashing a blinking icon of the world at me. I don't want the world; I want my Mac back! Why did this happen and, more important, what can I do to fix it?

SOLUTION: It sounds like your Mac forgot what startup disk to use and is searching for a Network Startup. This can happen after some security updates, especially if you hadn't specified your startup disk in the Startup Disk preference pane. Here's how to start up your Mac and check which startup disk your Mac is using.

Select the proper startup disk in the Startup Disk preference pane, or your Mac may go searching for a Network Startup disk.

1. Shut down your Mac, wait 30 seconds, and then restart it.
2. Immediately press and hold down the Option key. A series of icons should appear on your desktop, one of which represents your Mac's main boot drive. After your cursor changes from the wristwatch to the arrow, click that icon, and then click the arrow pointing to the right.
3. Once your Mac starts up, open System Preferences > Startup Disk, and make sure you select the proper disk and system version.

17. Can I Trash Hidden Folders?

PROBLEM: I found some huge hidden folders in my Mac. The *user name* > private folder, for example, is 1.5GB in size. Can I trash hidden folders to reclaim disk space?

SOLUTION: No. Hidden folders are essential to the inner workings of Mac OS X. For example, that *user name* > private folder contains all of your virtual memory swap files. It's not uncommon to see this folder swell to 2GB or larger. If you don't know what something is, don't delete it.
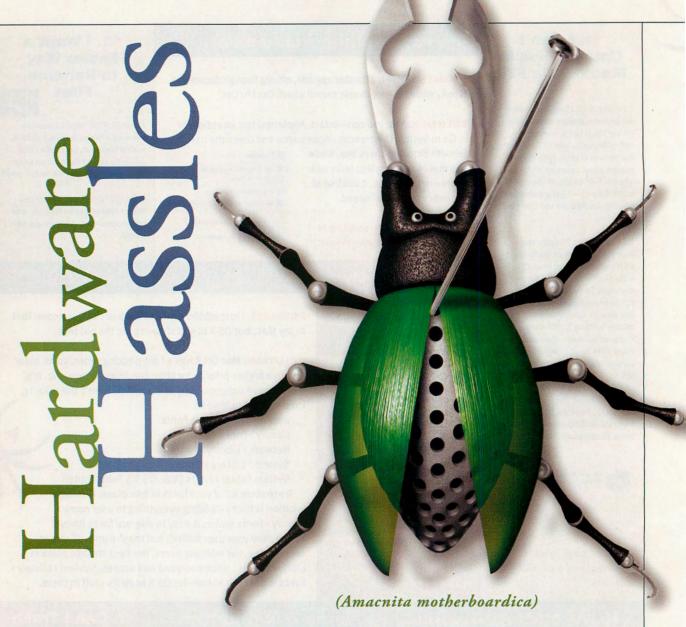
Hardware Hassles

(Amacnita motherboardica)

Hardware bugs are fun to mock when they're on your coworkers' machines—but when the tables turn, it's time for a dose of humility. Check out these bugs and their solutions, and hope you never have to come back here for reference.

18. My Printer Doesn't Like Paper

PROBLEM: I have an inkjet printer that I use only occasionally. Recently it started acting funny—funny peculiar, not funny ha-ha. Either it won't draw paper or the paper jams. I've cleaned all the nozzles and so forth, but nothing has helped.

SOLUTION: This problem can happen with any printer, not just inkjets. In a printer's sheet-feed mechanism, two rollers grip the paper and feed it through. If those rollers dry out, they can't properly grip the paper. If you can reach the rollers easily, wet a piece of cotton and let the water soak into them. You can use cotton swabs instead if it's a tight fit. Take care not to soak the inside of the printer—just one drop of water on the wrong part of a printer's logic board and poof, that's all she wrote. Or printed.

19. A Copy-Protected CD Won't Eject

PROBLEM: I was so excited to play *NSync's *Celebrity* CD that I failed to read the warning that said it was copy-protected and wouldn't play in my Mac. Now, not only can't I hear the dulcet tones of Justin et al, but also my Mac won't restart—it simply freezes on a gray screen after restart. What should I do?

SOLUTION: Sadly, some of the copy-protection schemes that CD vendors are playing around with these days cause massive problems in both PCs and Macs. If by chance a CD gets stuck in your Mac, try these methods for extracting it.

1. Hold down the mouse button while your Mac is starting up. This will usually eject the CD.

2. Hold down the X key during startup. This will tell your Mac to boot from the first Mac OS X partition it finds, hopefully bypassing the offending matter in the CD drive. Once it starts up, launch the DVD Player (but not iTunes, which might try to play the CD), and press the eject button.

3. Carefully stick the end of a paper clip in the manual eject hole on the front of your Mac's CD drive (some later-model Macs don't have one). This should coax the drive to release the disc.

If all of these methods fail, you've earned yourself a trip to your local Apple-certified repair center, where the talented technicians will be happy to resolve your problem for a few bucks.

20. My Mac's Fan Runs Constantly

PROBLEM: Man, my Mac is noisy! The fan runs *all* the time. It used to run only when I was doing something intensive, but now it won't shut up, even when I'm just reading email. What can I do?

SOLUTION: Recent Panther software updates have left many—but not all—users with this problem. Most of the time you can fix it by resetting your Mac's PRAM. As we explained in bug 7, you do this by restarting your Mac while holding down Command-Option-P-R.

21. My Mac Can't Find My iPod

PROBLEM: My Mac doesn't always see my iPod. I plug it in, and half the time my Mac ignores it. I know it's plugged in because my iPod charges, but it doesn't get any updates from iTunes or anything. What's going on?

SOLUTION: Twenty bucks says you have an iSight attached to your Mac (and likely directly to your Mac). As cool as it is, the iSight can be a bad neighbor to other FireWire devices. You have two options. *The first* is to plug the iSight in only when you need it so that it won't interfere with anything else. The second is to connect a powered FireWire hub to your Mac. In addition to providing more FireWire ports, this device powers your FireWire devices (which the iSight appears to need desperately). Both Orange Micro (www.orangemicro.com) and FireWire Depot (www.fwdepot.com) offer FireWire hubs that work well. Connect the hub to your Mac first, and then connect all of your FireWire devices to the hub.

We've also seen some iPods that—iSight or no iSight—need to be plugged directly into your Mac's FireWire port, *not* a hub. Picky little devils.

22. My 'Book Battery Thinks It's Dead

PROBLEM: I usually leave my PowerBook plugged in on my desk, so while flying to Rio recently, I was surprised when barely 30 minutes into my *Gnaw: Food of the Gods II* DVD I got a message saying I had only 10 minutes of power left. I thought Li-Ion batteries weren't supposed to suffer from the dreaded memory effect. Now I'll never find out about those giant rats!

SOLUTION: Li-Ion batteries don't suffer from the memory effect—at least not the same kind that old NiMH batteries did. Rather, they suffer as a result of the supposedly intelligent electronics inside them. After sitting on your desk, charging for months, the battery can get confused. To fix it, you need to reeducate your battery by letting your PowerBook drain all the way down to the point where it shuts itself off (just ignore the warnings). Once it shuts down, charge it all the way back up, let it drain, and repeat. Doing this a few times in a row should show your battery who's boss and set its electronics properly. Utilities like Jeremy Kezer's XBattery ($15, www.kezer.net/xbattery.html) will show you the battery's reported capacity.

⬤ ⬤ ⬤	Info
	Battery
Installed:	Yes
Charging:	No
Charger:	Yes
Battery %:	98
Capacity:	4.138Ah
Charge:	4.096Ah
Voltage	12.416v
Flags:	10905190
Amperage:	-1200

Xbattery is a fun little utility that lets you check vital stats on your 'Book's battery.

23. My 'Book Charger's Not Charging

PROBLEM: My charger no longer works with my PowerBook. What happened and how do I fix it?

SOLUTION: Charging up is a complex operation that involves a few different pieces of hardware and software working together—and both PowerBooks and iBooks can suffer from this symptom. Try each step below in order until your charger starts to work again.

1. This may sound obvious, but first make sure you're using the right charger. Different 'Books require different chargers—newer aluminum PowerBooks, for example, require the 65W charger that ships with them, and won't work properly (if at all) with the 45W chargers that shipped with earlier models.

2. Unplug the charger, check that the AC plug is snugly seated, wait 30 seconds, and plug it back in. In addition to ensuring that everything is assembled properly, this resets the charger.

3. Your battery may be the culprit, so remove it and attempt to start up with only the charger.

4. Reset the Power Manager on your 'Book. On older laptops, push the reset button (usually located on the back of the 'Book). On newer models, press Shift-Control-Option–power button. Check Apple's Knowledge Base article 14449 or your user manual for more information. Once you reset the Power Manager, wait 5 seconds before you attempt to restart.

If none of the above helps, make your way to a service center.

PROBLEM: My Power Mac G5 has started making strange screeching or chirping noises, not unlike a trapped specimen of the order *rodentia*. It's not overly loud but not overly quiet, either. Is my machine on the fritz?

SOLUTION: We've seen this problem on Aluminum PowerBooks as well—and your Power Mac G5 is likely perfectly healthy. Its chirps 'n' screeches are related to *napping*—a processor-specific feature whereby the processor operates in a lower power mode for split seconds at a time, reducing overall heat generation. There are two things you can do to control this problem. The simplest

is to go to System Preferences > Energy Saver > Options, and take a look at the Processor Performance setting. We experienced screeching at the Highest setting, but Automatic and Reduced seemed to eliminate it for the most part.

You can also get help from a set of Apple developer tools called CHUD (Computer Hardware Understanding Development, available free from http://developer.apple.com/tools/performance). In the Hardware preference pane that appears after you've installed CHUD, you'll find a check box labeled Nap. Uncheck it, and you'll end the noise, even when the Processor Performance is set to Highest. However, leaving napping disabled for extended

periods can cause your Mac's processor to overheat, so we recommend setting Processor Performance to Automatic and leaving napping enabled.

You can quiet your Power Mac G5 by not letting it nap—but you might fry its CPU. Use the Energy Saver system preference to set processor performance to Automatic or Reduced instead.

Apple-App Annoyances

(Applonia datamungia)

Safari, Mail, and all the iLife apps are just as important as the OS upon which they run. Problems with these apps can be as detrimental to your productivity as an OS or hardware bug can.

25. Mail Forgets My Password

PROBLEM: Whenever I try to use Mail, it asks me for my password even though: I entered it correctly in Preferences > Accounts. What's that about?

SOLUTION: Mail has a quirk: it will forget your password if it has trouble logging in to your account. If you're a .Mac user, this can happen frequently, as .Mac's mail servers have the habit of summarily rejecting logins (.Mac's mail servers occasionally go down but are usually back online quickly). All it takes is one failed login before Mail begins asking you for your password. Unfortunately, the only thing to do is type in your password, take a deep breath, and go about your day knowing it's not your fault.

26. I Want My AOL Mail in Apple's Mail

PROBLEM: How do I access AOL mail with Mail?

SOLUTION: AOL's mail servers let you check mail from Mail (or any IMAP email client) instead of logging into AOL. To set this up, do the following:

1. In Mail, go to the Accounts pane of the Preferences dialog.
2. Click the Add Account icon.
3. Select IMAP from the Account Type drop-down menu.
4. In the Description field, type *AOL Mail,* and type your email address (with @aol.com) and your name into their respective fields.

Tweak the account settings to access your AOL mail via Apple Mail.

5. In the Incoming Mail Server field, type *imap.aol.com,* then your AOL screen name and password in their respective fields.
6. Select Add Server from the Outgoing Mail Server (SMTP) drop-down menu.
7. In the dialog that appears, type *smtp.aol.com* in the Outgoing Mail Server field and type *587* in the Server Port field. Select Password in the Authentication drop-down menu and again type your AOL user name and password in the proper fields. Click OK, then close the Accounts dialog—save changes when prompted.

27. I Can't Order Prints in iPhoto

PROBLEM: When I try to order prints or a book via iPhoto, I get an error in accessing my account information. The message tells me to try again later. I've waited days and still had the same problem.

SOLUTION: iPhoto synchronizes with Apple's servers, so the app gets confused if the date or time on your Mac is off. Open System Preferences > Date & Time, click the Date & Time tab, and ensure that the settings are correct. Then relaunch iPhoto and try to access your account again.

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28. I Need a Playlist List

PROBLEM: In iTunes, when I select File > Get Info, I get a ton of info about the selected song but nothing about the way it's organized in iTunes. How can I tell which Playlist contains a given song?

SOLUTION: Merely select your favorite song, Control-click it, and select Playlists in the contextual menu that appears, and every Playlist that contains that song will appear—choose one, and you'll jump right to it.

29. My Bank Won't Let Me Use Safari

PROBLEM: I *hate* Internet Explorer, but Safari doesn't want to work with my bank's Web site. Why?

SOLUTION: Sounds like your bank's servers don't know what Safari is. If you tell Safari to masquerade as another browser—Internet Explorer, for example—sometimes you can fool the bank. The first step is to enable Safari's debug menu. Quit Safari, open the Terminal, and type `defaults write com.apple.Safari IncludeDebugMenu 1`. Next, press Return and relaunch Safari, and a new debug menu will appear in the menu bar. If you ever need to turn it off, simply repeat the above steps, but change the `1` to a `0` (zero) in the Terminal command. Open a new window or tab by selecting Safari, Debug > User Agent > Mac MSIE 5.22. Then cross your fingers, go to your bank's Web site, and log in to see if it works. You need to do this every time you pay an online visit to your bank, *before* you log in.

Disguise Safari as Internet Explorer for easier online banking.

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30. iPhoto Says I Have a Small Disk

PROBLEM: When I try to export a picture from iPhoto, the app tells me there's not enough disk space. I know I have more than enough. What's going on?

SOLUTION: This bug chiefly affects version 4. Though Apple says 4.0.1 fixes it, we've found that's not always the case. The most reliable solution is to delete the iPhoto preference file. Quit iPhoto, go to *user name* > Library > Preferences, trash the com. apple.iPhoto.plist file, and restart iPhoto.

Remove the com.apple.iPhoto.plist file from your user Preferences folder.

31. Safari Can't Find Web Pages

PROBLEM: Sometimes I get server errors when I try to access new pages in Safari, even though my connection is good.

SOLUTION: This can happen if your DNS (domain name service) servers are not responding properly. Your Mac connects to sites via their numeric IP addresses, not the text-based URLs you type. It does this by querying your ISP's or local network's DNS server and requesting a translation of the URL. The server returns the IP address and your Mac does the

rest behind the scenes. But if that DNS server doesn't respond, your Mac is dead in the water.

Simply tell your Mac to use a different DNS server; most ISPs have two or more. When you log in to your ISP, it assigns your Mac a DNS address. Restarting or logging out of, then back into your ISP may enable your Mac to grab a different address. If not, call tech support and ask for a complete list of addresses. Open the Network preference pane, click TCP/IP, and type the addresses in the DNS Servers field (one per line).

32. AppleWorks Keeps Playing with the Beach Ball

PROBLEM: AppleWorks used to work really well for me, but now I affectionately call it Apple-*doesn't*-Works—and that's only when I'm feeling affectionate. That damn beach ball spins more often than not, and although it's fun to space out while watching it, that's not always my desired effect.

SOLUTION: Yeah, AppleWorks often feels like the neglected stepchild Apple is forced to care for only occasionally. It does its job except when it doesn't—and this is one of those instances. AppleWorks keeps its own cache of recently used items, which sometimes gets clogged up with all sorts of temporary files, especially if you're opening and closing lots of little files. Getting rid of them, however, is straightforward: You simply need to delete a single folder. Quit AppleWorks, go to *user name* > Documents > AppleWorks User Data > Starting Points, find the Recent Items folder, and drag it to the Trash. The next time you open AppleWorks, it will re-create the folder, clean and empty—and the beach ball won't bother you so often.

33. Can iTunes 4.5 Arrows Be More Useful?

PROBLEM: I'll admit to liking quirky music. Only about half the stuff in my iTunes 4.5 Library is available in the iTunes Music Store, so when I click that little arrow next to an obscure song's name in iTunes' Song Name column, it sends me to the Music Store, only to find a search with no results, rather than a list of songs or albums by the same artist. Isn't there something more useful that little arrow can do for me?

SOLUTION: You bet there is. Option-click the little arrow, and instead of going to the Music Store, you'll go to the Album entry in your iTunes browser. If you're browsing a Playlist, for example, and you come across a Winger tune you love, but you can't remember the name

Option-click the arrow in iTunes 4.5's Song Name column to jump to that song's album listing in your iTunes browser instead of the Music Store.

of that *other* killer Winger tune you love, just Option-click the arrow next to the first Winger tune, and the song list of your entire Winger album appears. This trick can help you navigate quickly through iTunes.

If you want this to be the little arrow's standard behavior, quit iTunes, fire up the Terminal, type `defaults write com.apple.iTunes invertStoreLinks -bool YES`, and press Return. When you relaunch iTunes, your wish will be granted—if you want to ungrant that wish, type the same command, but change `YES` to `NO`.

34. Safari's Stalling

PROBLEM: Suddenly Safari stalls when loading just about any Web page. Other browsers on my Mac work fine, but Safari just hangs there no matter what I do. Am I a bad person?

SOLUTION: Unlikely though it may sound, chances are this problem appeared because you installed an HP printer. HP adds some fonts to your system, one of which—Times RO—has a known problem with Safari. To fix the problem, simply remove that font. It may exist in *user name* > Library > Fonts and/or in Library > Fonts—If you see it in either place, drag it to the Trash.

Delete the Times RO font to slap Safari out of its font-induced stupor.

35. Safari Slows to a Crawl

PROBLEM: Sometimes when I visit Web pages, Safari hangs and spins the beach ball for 10 to 15 seconds before letting me scroll or type into a form. This never used to happen.

SOLUTION: Safari has an option to keep track of everything you type into forms on Web pages. When you visit a Web page with forms, Safari needs a few seconds to sort through this data and figure out which pieces, if any, are relevant. To solve your spinning beach-ball problem, you can either disable the feature altogether or comb through your data and clear out unnecessary stuff.

To disable the form-filling feature, go to Safari's Preferences > AutoFill and uncheck the Other Forms check box. Note that this is *not* the same data used to fill out your name, address, and passwords; it's a list of Web sites that contain forms. To clear out unnecessary data, leave the box checked and click the corresponding Edit button. Then comb through the list, highlighting and removing sites you don't visit regularly. If you do take the time to comb through and delete unnecessary items, be aware that it will only solve your problem temporarily—with the feature enabled, the cache will fill back up before long.

Uncheck the Other Forms check box in Safari's AutoFill preferences to speed up Safari.

Alternately, you can edit the Web sites in the list and remove the ones you don't visit frequently.

36. I Want to Listen to Web MP3s in iTunes

PROBLEM: Every time I click an MP3 file on a Web page, it plays in Safari. How can I hear it in iTunes, with my EQ and volume settings arranged just so?

SOLUTION: In Safari's location bar, change *http* in the URL to *daap,* and press Return. This automatically opens the MP3 file in iTunes and plays it using your settings. DAAP (Digital Audio Access Protocol) is Apple proprietary, and most Web servers don't support it. But once Safari passes control to iTunes, iTunes is smart enough to open the file using standard HTTP—typing *daap* saves you the trouble of having to go into iTunes to open the song.

37. How Can I Disable Mail Accounts?

PROBLEM: I have two accounts set up in Mail: one for work and one for home. How can I make Mail check one account and not the other without digging into preferences every morning and afternoon?

SOLUTION: There are a few easier ways, but they're not readily apparent. Although the Get Mail button will check all of your active mail accounts, you can take accounts offline without going into the preferences by simply Control-clicking the appropriate in-box and choosing Take Account Offline in the contextual menu that

appears. Mail will skip that account when you click Get Mail or when you're doing automated checks. One note: If you take *all* your email accounts offline and then click Get Mail, Mail will assume you really *do* want to check your email and turn all of them back on.

New...
Rename...
Delete...

Synchronize "Mac.com"
Take "Mac.com" Offline
Edit "Mac.com"...

✓ Use Small Mailbox Icons

Erase Deleted Messages
Erase Junk Mail
Mark All Messages as Read

Take your work account offline for the weekend to avoid emails from your boss.

38. Can I Convert AAC Files to MP3?

PROBLEM: I bought a ton of stuff from the iTunes Music Store but can only listen to those tunes in iTunes or on my iPod. They won't work with my cute little flash-memory MP3 player, and I just don't like having different forms of music on my Mac. How do I convert these Store-bought AAC files to MP3?

SOLUTION: Apple has made this difficult for a reason: Converting AAC files to MP3 allows you to share those songs with anyone, and doing so would be illegal according to the terms of use you agreed to when downloading the song in the first place. As you mentioned, however, there are legitimate reasons for wanting to convert them to MP3, and it's not difficult. First, burn an audio CD of your purchased music. Next, go to iTunes Preferences > Importing and set it to Import Using The MP3 Encoder (otherwise you'll wind up with more AAC files—the resulting AAC files will be unprotected, but they still won't work with MP3-only devices). Then rip and encode the files back into iTunes.

39. Currency Conversions Cause Crashes

PROBLEM: When I go to Convert > Update Currency Exchange Rates in the Mac OS X Calculator, it quits on me. I really need to know the current value of my drachmas.

SOLUTION: This sort of thing happens a lot with Mac OS X apps. Deleting all related caches and preference files is often the quickest fix. Quit the offending application—in this case, Calculator—and go to *user name* > Library > Caches > *name of offending application*. Delete the entire contents of this folder. Then go to *user name* > Library > Preferences, and delete any preference files related to the offending app. For Apple apps, these are most often of the format com.apple.*application*.plist. Restart the application and try converting those drachmas.
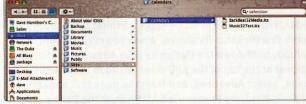
Remove its cache files to remind Calculator how to do a currency update.

40. I Need to Dump Old .Mac Calendars

PROBLEM: I deleted some old calendars from my Mac and then realized I had published them on .Mac. Now I can't delete them.

SOLUTION: Sure you can. All your .Mac stuff is stored on your iDisk—the trick is to know where to find it. Calendars are stored in a hidden directory, but you can force your Mac to look there by doing the following:

1. Mount your iDisk from the Finder's Go menu.
2. Choose Go > Go To Folder.
3. In the resulting dialog, type /Volumes/user name/Sites/ .calendars.
4. Drag any unwanted calendars to the Trash.

Use the Go To Folder command to access hidden calendars.

41. I Want Hotmail to Work with Mail

PROBLEM: I can't figure out how to get my Hotmail account configured for Mail—is it possible?

SOLUTION: While there's no native support for Hotmail in Safari or Mail, the free, open-source HTTP Mail Plugin (currently in beta, http://sourceforge.net/projects/httpmail-plugin) allows you to integrate your Hotmail and MSN mail accounts with Mail. Install Plugin, then launch Mail, go to Preferences > Accounts, click the plus-sign (+) icon, and choose httpmail from the Account Type drop-down menu.

Then enter your account information in the Accounts dialog and click OK. If you want to remove the plug-in, find it in *user name* > Library > Mail > Bundles > httpmail.mailbundle > Contents > MacOS, and toss it in the Trash.

Use the open-source HTTP Mail Plugin to access Hotmail or MSN mail accounts with Apple's Mail.

Network Nastiness

(Disconnecticus communicatus)

Well, one thing was easier on a Mac in 1984: networking. Of course, you couldn't do all the cool things you can do now, but it sure was nice not worrying about subnet masks, SOCKS proxies, and 802.whatever protocols.

42. I Can't Print to a Windows Printer

PROBLEM: My Mac is connected to the same network as my Windows-based PC. I could print to the old printer I had connected to my Windows machine. I connected and shared the new printer the same way and installed the appropriate driver—my Mac sees the printer, but it won't access the right driver. Can I force it to use the right driver, or am I out of luck?

SOLUTION: You're *in* luck—Apple's Printer Setup Utility has a few tricks up its sleeve. When you click the Add button, hold down the Option key. An Advanced option will appear at the top of the pull-down menu in the resulting pane. Select Advanced, and from the pane that appears, choose Windows Printer Via SAMBA from the Device pull-down menu. Next, name your printer in the Device Name field, and type the SMB path to the printer in the Device URL field as *smb://computer name/shared printer name*

(for most situations) or *smb://user name: password@workgroup/ server/shared printer name* (if you're in an authenticated server environment). Finally, choose the appropriate printer driver from the Printer Model pull-down menu, and click Add.

Hold down the Option key when adding a printer to get the Advanced menu, which allows you to add some particularly pesky Windows-based printers.

43. Airport Crashes My Router

PROBLEM: I have a third-party wireless router, and while it works fine with other Macs, when I connect my AirPort Extreme–enabled PowerBook to it, my router crashes. I have to unplug the router's power cable, then plug it in again for it to work. What do you think is going on?

SOLUTION: While it's technically a standard, some routers just can't deal with the soon-to-be-more-widely-used-someday-maybe IPv6 protocol, which was originally designed to accommodate the exponentially expanding number of Internet addresses but isn't currently all that popular. To turn it off, go to System Preferences > Network > AirPort > TCP/IP, and click the Configure IPv6 button. In the pane that appears, turn it off by selecting Off in the Configure IPv6 drop-down menu and enjoy crash-free router bliss.

Turn off IPv6 to allow better compatibility with some third-party routers.

44. My Macs Can't Find Each Other

PROBLEM: I have a wireless network setup here at home, and Internet access on each machine works flawlessly. However, I'm having a heck of a time getting my Macs to see each other reliably. Sometimes they see each other fine, while other times it's as though the network doesn't even exist. Internet access always works, so I know the network is in good shape. What the Woz is going on?

SOLUTION: This is a weird problem that has an equally weird source: the name of your wireless network. We've seen strange bugs appear when a wireless network has multiple words (that is, contains spaces) in its name. If your network is named My Home Network, try renaming it MyHomeNetwork—chances are this will resolve the problem. This bug can also affect other networking apps, including Retrospect backups, so it's worth changing your network name even if you aren't yet experiencing problems.

QUICK FIX

45. I Want to Switch Network Addresses Quickly

PROBLEM: At home, my network router uses one set of IP addresses (in the 10.0.x.x range), and at work, our routers use another (in the 192.168.x.x range). Sometimes when I move my 'Book from work to home, I have to restart it to get it to refresh its address on the new network. There's got to be an easier way.

SOLUTION: These addresses are provided to your 'Book via a protocol called DHCP (Dynamic Host Configuration Protocol). Apple has thoughtfully provided a button in the Network preference pane (labeled Renew DHCP Lease) that you can click to reacquire DHCP information from your router. But clicking it can result in significant delays when changing from one network to another. Here's a workaround: Go to System Preferences > Network > Ethernet (or AirPort) > TCP/IP. Ensure that Configure IPv4 is set to Using DHCP and change what's listed in the DHCP Client ID field. If nothing's there, type a fake IP address—anything that's different from what was listed as your IP address when you opened up the preference pane—then click Apply Now. Your Mac immediately reacquires its private IP address from the DHCP server.

Changing the DHCP Client ID is a sure-fire way to get your Mac to refresh its DHCP information.

46. My USB Print Server Won't Work

PROBLEM: I have my USB printer hooked up to one of those third-party print servers—it connects to my older Base Station and lets me print wirelessly across my network. Well, at least it used to. Ever since upgrading to Panther, I can't get it to work.

GEEK ALERT!

Set your network printer's queue to lp1 to make sure your docs really print.

SOLUTION: Launch Printer Setup Utility, select the printer, and click Add. In the pane that appears, select IP Printing in the top drop-down menu, select LPD/LPR from the Printer Type drop-down menu, enter the IP address of your print server in the Printer Address field (you can find this address using your router's configuration utility), type lp1 in the Queue Name field, then choose your printer model and driver from the Printer Model drop-down menu. Click Add, and print away. In case you're wondering, lp1 is the name of the most common default printer queue in IP printing.

47. I Can't Log In to a Windows Server

PROBLEM: My office server runs Windows and I use Panther on my iBook. I can see all the network computers, but have trouble logging in to the server.

SOLUTION: Later versions of Panther require the Windows machine to share at least one folder in addition to sharing an entire drive. To share a folder in Windows, right-click one folder and choose Sharing. Enable Sharing in the resulting dialog, and click OK. Windows will update its permissions, and your Mac should connect properly.

48. My AirPort Doesn't Like PPPoE

PROBLEM: My ISP uses PPPoE. When I connect to the Internet with my Mac directly connected to my DSL modem, everything's fine, but if I go through my AirPort Base Station, I can only load about half of every Web page and connections become generally wonky. What gives?

SOLUTION: Apple's AirPort software used to fail to negotiate the proper settings with PPPoE providers at times and cause exactly these problems—and many, many more. Thankfully, as of Base Station firmware 5.1, things are working just fine. Connect your Mac directly to your DSL modem, and download AirPort Update version 3.1 (or later) from www.apple.com/swupdates. Install the update, and then run the AirPort Admin Utility. Once it sees your Base Station, it will offer to upgrade the firmware. Click the Update button, and your problems should be over.

Update your Base Station's firmware to stay ahead of bugs.

49. Changing Network Locations Takes Forever

PROBLEM: I'm not clear on how to use networking presets. I have several different locations set up, but choosing them from the Location pop-up menu in the Network preference pane doesn't always activate them. I have to click the TCP/IP tab, the AppleTalk tab, and Apply Now. What's the point of the preset?

SOLUTION: Go to your Apple menu and choose Location. From the list that appears, choose your preferred location to activate it immediately.

50. My Friends Can't Find My Web Site

PROBLEM: My AirPort Base Station shares my cable-modem with three other Macs in my house. I set up a Web server on my Mac and want my friends to be able to access it. My IP address is set to 10.0.0.100 in my Network preference pane. Even though I set my Base Station to forward Web-page requests through port 80 to my Mac, my friends can't see my Web page when they point their Web browsers to http://10.0.0.100/. Are my network settings wrong?

SOLUTION: No, your network settings aren't wrong—they're just telling you what your Base Station wants them to tell you. Your Base Station uses a little network trickery called NAT (network address translation) to share a single IP address among all the Macs in your house. The Station assigns each Mac a *private* IP address that's not accessible from the outside world—you need to have your friend connect to the *external* IP address provided by your ISP. Unfortunately, your Mac has no way of knowing what that address is. To find it, go to any one of the following Web sites:

> http://checkip.dyndns.org
> http://ip.nefsc.noaa.gov
> www.whatismyip.com
> www.whatismyipaddress.com

Once your Base Station's forwarding is set up, have your friends use that IP address to access the Web site you're hosting.

Dave Hamilton (aka "He from Whom All Mac Knowledge Flows") is president of the Mac Observer. Although he has always had an aversion to Mac bugs, the current cicada infestation does not concern him.

DV Camcorder FACE-OFF!

MacAddict Gets Up Close and Personal with Ten DV Camcorders

Moviemaking on your Mac is a breeze, thanks to boffo apps like iMovie and iDVD. A modern Mac packs a lot of video punch, but only when paired with an equally critical piece of equipment: a top-quality camcorder. Choosing the right camcorder, however, can be a challenge. Browsing in a big-box electronics store might help you narrow your choices, but it's easy to get a little befuddled by the sheer range of choices, confusing manufacturers' claims, and pushy salespeople. To help, we've auditioned ten MiniDV camcorders—MiniDV being the best DV format for Mac-based moviemaking. Read on to see which ones get starring roles in the low-cost, midrange, and prosumer categories.

by Andrew Tokuda

You have a lot of factors to consider when navigating the ocean of camcorders that clutter the aisles of Best Buy, the Good Guys, Costco, and the like: optical and digital zooming, night-vision modes, special effects, and built-in lamps for low-light shooting, to name just a few. There are more camcorders available than you can shake a stick at—assuming you're the stick-shaking sort—with more coming along every day.

To help you in your quest, we picked out a representative sampling of ten MiniDV camcorders from major manufacturers, priced from about $500 to $3,000. We tested each camcorder's image quality, ability to deal with high- and low-light situations, exposure-shift response (how quickly the camcorder adapts from one lighting extreme to another), comfort, usability, ergonomics, zoom capability, and audio-recording capability. We focused each camcorder on similar images and evaluated their performance in bright sunlight, regular room lighting, and darkened rooms. Finally, we considered each camcorder's weight and shape, as well as the design of its controls, and then added up all of our findings to determine our winners—and losers.

We first looked at four low-cost models: the Canon ZR90 ($599, www.canondv.com), JVC GR-D72 ($549.99, www.jvc.com), Panasonic PV-GS15 ($499.95, www.panasonic.com), and Sony DCR-HC20 ($499.99, www.sony.com). These compact camcorders are easily portable, and are often equipped with bells and whistles—such as built-in effects and lamps—that are absent in pricier, more-professional camcorders, which concentrate exclusively on high-quality video.

We then set our sights on four midrange camcorders: the Canon Optura Xi ($1,499), JVC GR-DVP9 ($1,299.95), Panasonic PV-GS200 ($999.95), and Sony DCR-HC85 ($999.99). These models have higher resolutions, better lenses, and fewer—or more useful—gadgets, and they're edging from the consumer into the prosumer realm. Controls on these models are in most cases manual rather than automatic—standard operating procedure as prices increase.

Finally, we indulged ourselves with the Sony DVR-VX2100 ($2,999.99) and Canon GL2 ($2,799). These prosumer camcorders are larger than the others, eschew the image-processing gadgetry found in many lower-cost camcorders, include manual and automatic controls, and have high-quality optical components. At this level a camcorder is all about image quality—if you can afford one of these beauties, you'll enjoy video good enough for both personal and professional use. Even some working videographers favor prosumer camcorders, although most prefer still more-expensive gear.

MiniDV camcorders can be complex lil' beasties, stuffed with features and capabilities that can either help you shoot better video or unnecessarily confuse you. Before setting foot in that electronics store, read on to arm yourself with the real story behind manufacturers' claims.

Canon Optura Xi

Panasonic PV-GS200

JVC GR-DVP9

Sony DCR-HC85

Canon GL2

Optical and Digital Zoom

Zooming—bringing a faraway subject closer to view—is a standard camcorder feature, but don't get caught in the digital-zoom hype. Some models reviewed here tout impressive-sounding 700x to 800x digital zoom (such as the midrange Panasonic PV-GS200 and the low-end JVC GR-D72). Others, such as the high-end Sony DCR-VX2100 and Canon GL-2, have much smaller digital zooms (48x and 100x, respectively). Optical zoom for all these camcorders, however, ranges from 10x to 24x (see "Camcorders by the Numbers," p38).

There's a world of difference between optical and digital zooms. Optical zooming brings an image closer by changing the focal length of the lens—the method used in still cameras—and doesn't degrade the image. Digital zooming makes the image appear larger by magnifying pixels, a process that can make an image look jagged and pixelated. A digital zoom isn't useful at the higher ranges—when you zoom all the way in on an 800x model, for example, you won't see anything recognizable. Also, when you zoom in that far, any camera movement will make the image extremely shaky, as though you've consumed a gallon of espresso before shooting. So don't pay much attention to a camcorder's digital

zoom spec unless you want close-ups that look like indecipherable experimental video. Look instead for the optical zoom number. A 10x to 16x range is fine for most uses, and the image will always be clear and unpixelated (see "Optical and Digital Zooming," right).

Still Images Most camcorders, including all the ones we've reviewed here, can take still pictures in addition to shooting video—handy for Disneyland trips if you only want to take one camera. All these camcorders except one (the Sony DCR-HC20) save images to media cards; the DCR-HC20 saves stills to tape. The ones that save to media cards can store high-resolution images (such

Panasonic PV-GS15
JVC GR-D72
Sony DCR-HC20
Canon ZR90
Sony DCR-VX2100

as 1,600 by 1,200 pixels in the case of the Sony DCR-HC85), while tape-only recording limits you to the same resolution as the video (640 by 480 pixels). And be forewarned: You'll get much better still photos with a digital camera. Camcorders are designed primarily for video recording—don't try to make yours serve two masters.

Multiple CCDs A camcorder with three CCDs (charge-coupled devices), light-sensitive image sensors, uses a separate sensor to capture each color—red, green, and blue—that makes up a video image. Three-CCD camcorders generally provide a better picture with less visual noise, or graininess, especially in low-light conditions, because they have more image data to work with than single-CCD models. Adding CCDs adds cost, so the low-cost and midrange camcorders we looked at are all

single-CCD, except the Panasonic PV-GS200. The two prosumer models we tested both use three CCDs. In well-lit situations, single-CCD models work acceptably well.

Night Shooting Some camcorders, including all the models we looked at except the Sony DCR-VX2100, Canon GL2, and Panasonic PV-GS15, can shoot in night mode—in darkness, that is. Camcorders accomplish this in two ways: One is to turn on the device's built-in lamp, and then reduce the shutter speed to allow more light to come in for each frame; the rate adjusts automatically according to available light, and can go as low as 1/2 second (under normal bright light it's up in the range of 1/500 to 1/2,000 of a second). Camcorders using this method include the Canon Optura Xi and ZR90 (Canon calls its night mode Super Night), Panasonic PV-GS200 (Magic Pix), and JVC GR-D72 and GR-DVP9 (Night Alive). Unfortunately, a low shutter speed often produces unrealistic motion because it exposes the frames much longer—movement can be blurred or jerky. Also—to point out the obvious—if you turn on a lamp, you're not truly shooting in the dark any more.

The alternative method uses infrared light, which is invisible but creates an image with a greenish tint. Colors don't come through with infrared shooting; the image looks mostly black and green—think of the scary scene near the end of *Silence of the Lambs*, where the killer is wearing night-vision goggles to follow the agent through a darkened house. The Sony DCR-HC20 uses this method, calling it NightShot Plus, and the Sony DCR-HC85 uses a combination of infrared light and slowed shutter that it dubs Super NightShot Plus.

Other Formats There are other DV formats, but we recommend sticking with MiniDV, the most widespread camcorder type and the least troublesome option when it comes to getting editable video onto your Mac. Sony's Digital8 format, used in camcorders such as the Sony TRV460 ($399.99, www.sony.com), records DV onto standard analog 8mm videotapes. This is a handy setup, but one that never caught on—Sony is shifting its focus to the MiniDV format. It's best to stay with the flow of the industry so you don't get caught with an obsolete device later on.

Camcorders that use Sony's MicroMV format don't work with Macs, and camcorders that record directly to DVD-R, such as Sony's DCR-DVD101 ($899.99, www.sony.com), produce MPEG-2 video, which can't be edited in Apple's iMovie or Final Cut Pro or Express. To get usable video onto your Mac with a DVD-R camcorder, you'd need to perform serious futzing with noncommercial conversion shareware such as Studio Per L'arte Visuale's MPEG2 Works ($10, www.mpeg2works.2ya.com).

Optical and **Digital** Zooming

Optical zoom, good. Digital zoom, bad. To see why we're so firm about this assessment, take a look at these images, captured using a Panasonic PV-GS200 but representative of all the models we tested.

NO ZOOM In this shot, the camcorder is set at *full wide*, meaning with no zoom at all.

10X At maximum optical zoom—10x in this example—image quality remains sharp.

25X Here's digital zoom at 25x. Even at this comparatively low magnification, the image becomes pixelated as the camcorder magnifies the image digitally.

700X This is ridiculous. At 700x digital zoom, the image is completely useless. Don't let those big digital-zoom numbers tempt you.

Low-Cost Camcorders

Sony DCR-HC20 ●●●●●

▸ $499.99 ▸ www.sony.com

EDITORS' MacAddict CHOICE

This little guy is the best camcorder in the low-cost category, with the best overall image quality under high- and low-light conditions. You control the settings in a touchscreen LCD display, which provides two useful features: Spot Focus allows you to focus on a particular subject, even if that subject is not in the center of the screen, by touching the LCD where you want the camcorder to focus. Similarly, Spot Metering allows you to touch the area of the subject in which you want the camcorder to set the exposure, so if there's bright light in one part of the shot but dim light in another, you can choose the area that provides the best overall exposure setting. The NightShot Plus infrared feature lets you shoot in complete darkness without the jerky effects of recording at low shutter speeds—we found it worked quite well. One drawback is the DCR-HC20's black-and-white viewfinder—the only one in our camcorder menagerie. Since the controls are on the LCD anyway, the viewfinder is nearly superfluous, so we'll let that slide. This DCR-HC20 isn't particularly quiet, and its built-in microphone picks up some motor noise. It's an excellent camcorder, however, so don't let that put you off—treat yourself to

an external microphone to lessen the noise.

Canon ZR90 ●●●○○

▸ $599 ▸ www.canondv.com

The ZR90 is at the top of Canon's three-camcorder ZR line, which is aimed at home users. Its optical zoom of 22x is the second-highest zoom of all the camcorders we reviewed. The maximum digital zoom is 440x, which is less ludicrous than the Panasonic PV-GS15's 800x, but images shot at

Built-in Special Effects: ▸▸▸▸▸▸ Just Say No

We haven't discussed the special-effects capabilities of these camcorders at all—you know, the ones that make the image into a mosaic or flip it end over end, that sort of thing. Why would we ignore such niceties? Because they're gimmicky, useless, cheesy, a waste of time and energy to learn—and most important, they're for people who don't have a Mac to edit video. That's not you—with iMovie, iDVD, or Final Cut Pro or Express,

even relatively low digital-zoom levels were still quite pixelated—and virtually unrecognizable when we zoomed in all the way. The ZR90's night mode picks up images in extremely low light, but the image quality looks worse than a third-generation VHS dupe of *The Blair Witch Project*. Luckily, the camcorder has a shoe adapter so you can attach an optional video light. The camcorder has what appears to be a built-in light below the lens, but it's actually a white LED assist lamp used in night mode. This is useful in a pinch, but doesn't provide decent image quality. As a bonus, the ZR90 comes

with a wide-angle lens adapter that allows you to fit more of life's rich pageant into a shot.

JVC GR-D72 ●●●○○
▸ $549.99 ▸ www.jvc.com

The GR-D72 has some decent features for the price, including a built-in LED lamp that automatically turns on (assuming the camcorder is set to auto) in low-light situations. There's also a Night Alive mode that reduces the shutter speed for even darker situations or when the lamp doesn't illuminate your subject well enough. Unfortunately, the low shutter speed makes the video look grainy and jerky. You can also turn the lamp on and off manually, useful for situations where lighting is inconsistent. A built-in Strobe effect captures a series of fast-sequenced images on tape, and a thoughtful Blank Search function stops you from recording over prerecorded portions of tape. The overall picture quality is average for a camcorder in this price range, but not as good as the Sony DCR-HC20's.

Panasonic PV-GS15 ●●●○○
▸ $499.95 ▸ www.panasonic.com

The Panasonic PV-GS15 is a compact, comfortable camcorder with all the features you need for basic video shooting. This model's 24x optical zoom is the highest among all the camcorders we tested, and images look quite good at full optical zoom. The PV-GS15 also has a ridiculous 800x digital zoom, which made it impossible to make heads or tails of what we were shooting. If you want to take high-quality stills, you may want to look at other models—or, better yet, get a digital still camera—because the PV-GS15 records JPEG still images onto SD media at a maximum of 640 by 480 pixels. This resolution is fine for video but not for printable stills. The LCD lamp is nice and bright, but we'd prefer a hot accessory shoe to attach an external one. This camcorder has selectable shooting modes in addition to night mode, including Sports Mode for fast-moving images, and Portrait Mode, which focuses on a nearby subject but leaves the background out of focus.

you have tools enough to ignore these in-camcorder features altogether and create far superior special effects on your Mac. The effects available in these video-editing apps outnumber and outclass anything built into a camcorder. The low-cost Sony DCR-HC20, for example, includes some typical effects such as Solarize (for an overexposed, washed-out look), Pastel (exaggerated colors for a cartoonish effect), and Sepia (a tinted monochrome look for old-timey footage)—but none of them produces good results. Take a tip from the prosumer cameras, which don't play the special-effects game at all.

It's not wise to do special effects in-camcorder anyway, because you can't undo them as you can when editing on your Mac. Built-in effects perform a destructive process that alters the image data— once it's done, it's done. You can't change your mind and take out cross-dissolve transitions or turn a sepia image into a full color one if you add those effects in-camcorder. With software such as iMovie, you can create effects, tweak them, and try them out until kingdom come. If you decide you don't like them, simply consign them to the cutting-room floor by choosing Undo.

Glossary

ACCESSORY SHOE Use this slot to attach lights, microphones, or other accessories. Shoes are *hot* if they provide an electrical or data connection to the camcorder; a *cold* shoe provides no power or control, just a physical mount.

CCD A *charge-coupled device*—a light-sensitive image sensor—captures images in digital still cameras and video camcorders. CCDs convert light's photons into electrons, which build up into a charge. The charge is converted into a digital number, and a digital-to-analog converter then transforms the digital values into an image.

CODEC A codec (short for *compression/decompression*) squeezes video or other data into a smaller size for storage or transport, then converts it back to its original state when viewed.

INTERLACED VIDEO NTSC interlaced video (see p39) first displays only the odd-numbered lines of the image in a 60th of a second, then all the even-numbered lines in the next 60th, resulting in display of the full image at 30 frames per second.

LCD DISPLAY This is a smallish screen that shows what the camcorder is recording.

MEDIA CARDS These small RAM-based memory devices store still images. The camcorders we looked at use either SD (Secure Digital, a card the size of a postage stamp) or Sony's Memory Stick Duo design.

MINIDV This popular tape format is used in consumer and professional video camcorders that rely on the DV codec.

Midrange Camcorders

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CONTENDERS:
Our middleweight group of camcorders, priced in the $1,000 to $1,500 range, includes (from left to right) the **Sony DCR-HC85**, **JVC GR-DVP9**, **Panasonic PV-GS200**, and **Canon Optura Xi**. These models offer better optics and resolution than the low-end ones, and in most cases have pro-style manual controls.

Canon Optura Xi ●●●●○

▸ $1,499 ▸ www.canondv.com

This camcorder is on that midrange-prosumer threshold—the only thing keeping it from crossing over is that it uses a single CCD instead of three. In addition to easy-to-use automatic operation, it has a healthy dose of manual features, such as aperture and shutter priority for controlling the picture's exposure based on the camcorder's iris or shutter speed—manual functions such as these are good stepping-stones toward more-professional, manually set shooting. The 3.5-inch LCD display is clearer and brighter than the touchscreen LCD of the Sony DCR-HC85, and the pushbutton- and dial-driven menus are easy to navigate. A zebra-pattern function provides a visual clue of overexposed portions of an image by displaying a diagonally striped pattern on these areas, prompting you to adjust the exposure setting to compensate—this nicety is usually found only in more expensive, professional camcorders. The Optura Xi's maximum still-photo resolution is a hefty 1,632 by 1,224 pixels. On the downside, zooming isn't too quick; speeding this it up a tad would make life easier—and close-ups quicker to achieve.

Sony DCR-HC85 ●●●○○

▸ $999.99 ▸ www.sony.com

The DCR-HC85 has handy animated touch controls on its LCD display, which let you access the camcorder's menu, as well as the Spot Focus and Spot Metering features. The display measures a healthy 3.5 inches, and although you might think such a large screen would make for easy viewing, that's not the case. Even with its brightness turned way up, the display's lack of contrast makes it nearly impossible to use in bright sunlight—even if

Camcorders by the Numbers

Here's a handy reference chart to take with you when you're camcorder shopping, with each camcorder's basic specs and our ratings and recommendations. Happy shopping—and happier shooting!

Rating		List Price	CCDs	Optical Zoom	Digital Zoom	LCD[1]	Night Vision	Media for Stills	Still Resolution	Built-in Lamp	Accessory Shoe
LOW-COST											
●●●●●	**Sony DCR-HC20**	$499.99	1	10x	120x	2.5	yes[2]	tape	640x480	no	hot
●●●○○	**Canon ZR90**	$599.00	1	22x	440x	2.5	yes[3]	SD	640x480, 1,024x768	for night mode	hot
●●●○○	**JVC GR-D72**	$549.99	1	16x	700x	2.37	yes[3]	SD	640x480, 1,024x768	yes	none
●●●○○	**Panasonic PV-GS15**	$499.95	1	24x	800x	2.5	no	SD	640x480	yes	none
MIDRANGE											
●●●●○	**Canon Optura Xi**	$1,499.00	1	11x	220x	3.5	yes[3]	SD	1,632x1,224	for night mode	hot
●●●○○	**Sony DCR-HC85**	$999.99	1	10x	120x	3.5	yes[4]	Memory Stick[5]	640x480, 1,600x1,200	for night mode	hot
●●○○○	**Panasonic PV-GS200**	$999.95	3	10x	700x	2.5	yes[3]	SD	1,760x1,320	for night mode	hot
●○○○○	**JVC GR-DVP9**	$1,299.95	1	10x	200x	2.0	yes[3]	SD	1,600x1,200	no	hot
PROSUMER											
●●●●●	**Sony DCR-VX2100**	$2,999.99	3	12x	48x	2.5	no	Memory Stick[5]	640x480	no	hot
●●●●○	**Canon GL2**	$2,799.00	3	20x	100x	2.5	no	SD	1,488x1,128	no	hot

[1] Inches, diagonal. [2] Infrared. [3] Shutter. [4] Infrared and shutter. [5] These models use Memory Stick Duo, smaller than Sony's original Memory Stick.

you shade it with a sun visor. Since you access all the controls through the LCD, this is not an optimal setup. The display can also make it difficult to operate the unit properly. For example, if you want to adjust the exposure manually, you have to try to look past the graphic controls (and presumably through your finger) to see the effects of your adjustments. A hardware dial is better suited for overall exposure controls.

Panasonic PV-GS200 ●●○○○
▸ $999.95 ▸ www.panasonic.com
We were excited to find a three-CCD camcorder (with a top-flight Leica Dicomar lens, even) for under $1,000. Our giddiness subsided when we found that the PV-GS200 doesn't provide good color reproduction except under bright light—and all the camcorders we tested, whether single- or three-CCD, produced colors well under bright light. In standard room lighting (not even dim lighting), the PV-GS200's image quality dropped tremendously. In fact, we found that in room lighting it produced even grainier images than the single-CCD Sony DCR-HC20, which costs $500 less. The PV-GS200 has a high still-image resolution of 1,760 by 1,320 pixels, but the image quality just wasn't there. This three-CCD deal sounds too good to be true—and it is.

JVC GR-DVP9 ●○○○○
▸ $1,299.95 ▸ www.jvc.com
The GR-DVP9 looks and feels awkward, as is often the case with vertically oriented, box-shaped camcorders. It has the smallest LCD display of all the tested models, measuring only 2 inches. The camcorder's shape made it hard to use the viewfinder, and the battery release and tape eject buttons are too close to the camcorder's controls, especially if you have big fingers. The membrane buttons provide little tactile feedback, making it difficult to set up your camcorder quickly and easily. The image quality isn't too bad if you can get around all these shortcomings, but we still rank the GR-DVP9 at the bottom of all these camcorders.

CONTENDERS: Our heavyweights, the **Sony DCR-VX2100** (left) and the **Canon GL2**, cost $2,999.99 and $2,799, respectively. Both have three CCDs.

automatic-shooting mode, for example, makes it hard to get a bad shot. Still images are limited to 640 by 480 pixels as a maximum size—but pros don't pay big bucks for a camcorder so they can take still photos. The VX2100 is costly, but worth it for its excellent video quality, ease of use, and professional features.
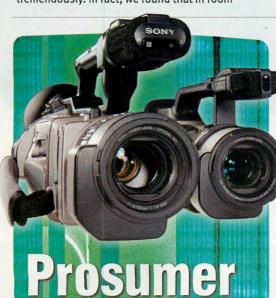
Canon GL2 ●●●●○
▸ $2,799 ▸ www.canondv.com
The GL2 is a solid camcorder with an excellent lens. What sets this camcorder apart from the others is its frame mode, which essentially scans 30 progressive, noninterlaced frames per second rather than capturing 60 fields per second of interlaced video. Canon touts this feature for its ability to extract clean stills from video footage (because there are no interlacing artifacts). This feature provided video that looks cinematic, since it is close to film's standard of 24 frames per second. The audio-level meters and the individual manual adjustment dials are great for audio-conscious shooters, especially in uncontrollably loud or quiet circumstances. The one thing that knocks this camcorder down from a top rating is its extremely slow zoom speed. ∎

Sony DCR-VX2100 ●●●●●
▸ $2,999.99 ▸ www.sony.com
The VX2100 is nearly twice the size and thrice the weight of the compact camcorders. But you should expect some bulk in the big leagues—camcorders and accessories alike tend to get larger as they go pro. The lower-end camcorders hype their special effects and digital-zoom capabilities, but the VX2100 focuses on the quality of the image and the way it handles light. This three-CCD model provides a broadcast-quality image. The two-step ND (neutral density) filter makes shooting in extremely bright situations more controllable by cutting back on the light hitting the CCDs. For all its professional qualities, the VX2100 is still newbie-friendly—its

Andrew Tokuda is a video producer, musician, *MacAddict* contributing editor, and man-about-town who always carries a camcorder with him because you just never know what might be worth videotaping.

MacAddict RATINGS

MacAddict RATED	MacAddict RATED	MacAddict RATED	MacAddict RATED	MacAddict RATED
●●●●●	●●●●○	●●●○○	●●○○○	●○○○○
AWESOME	**GREAT**	**SOLID**	**SO-SO**	**LOUSY**
You'll be blown away.	You'll be impressed.	You'll be satisfied.	You'll be disappointed.	You'll be pissed off.

REVIEWS ▶ 41

better living through smarter shopping

Hold this page up to your ear and listen closely. Hear that? Of course you don't—but if this were an actual Xserve G5 instead of a magazine photo, it'd be nearly as silent—at least when compared to the original Xserve G4. Other big irons we fired up this month include two 1TB (that's *terabyte*, as in a *thousand gigabytes*) storage systems, a pair of 8-megapixel cameras, two design apps for folks who are more comfortable pencil sketching than pixel pushing, and the single most bulletproof PowerBook case we've ever seen. In the near future, we'll let you know whether the 256MB Radeon 9800 Pro for Mac Special Edition's extra VRAM—double that of its non-Special sibling—makes our games twice as much fun.

X Compatible with Mac OS X or later.

9 Compatible with Mac OS 9 or earlier.

EDITORS' MacAddict CHOICE

We'd spend our own hard-earned money on this product.

PHOTOGRAPH BY SAMANTHA BERG

EDITORS'
MacAddict
CHOICE

show up in the Project Center window. Since we always keep Entourage open, Project Center has proven to be a great way to launch Word docs, PDFs, and so on without having to locate them in the Finder.

Unfortunately, Project Center is like Eliza Doolittle before Henry Higgins took her in: It's got potential, but it's not as refined as it could be. For example, if you identify a Watch Folder containing email, messages must be in the root level of that folder—not in a subfolder—for it to appear in your project. Also, in the Files pane, it would be nice to be able to create new folders as well as move files around instead of just being able to launch them.

There are several other additions to Office—some more useful than others. We love the Scrapbook (available in Word, Excel, and PowerPoint), which lets you store text and graphics in the new toolbox palette—a great place to keep templates, email text, and images you use frequently. In the toolbox's Project Center tab, you can access projects from each Office app, and in the Compatibility Reports tab, you can check whether your document will appear correctly in other versions of Office—not particularly useful to us but helpful for folks who constantly trade files, especially with Windoze users.

While we like the features that live in the toolbox, it's yet another palette to crowd the desktop. We wish Microsoft would find better ways to integrate these features, or at least employ some sort of tabbed or docked palettes that would allow us to quickly move them all out of the way. Microsoft must be aware of this problem, because you can now set Formatting Palettes to fade into transparency after a user-defined period of disuse, which helps. A bit.

Office 2004

MO' BETTER, MO' BLOATED PRODUCTIVITY SUITE

Just as the Energizer Bunny keeps going and going, Microsoft Office keeps growing and growing. Office's latest growth spurt is an impressive one, bringing scads of new and powerful features to the table, and making the previous version of Office X look somewhat dated.

Office comprises four apps: a word processor (Word); a spreadsheet (Excel); a presentation-builder (PowerPoint); and an email, contacts, and calendar app (Entourage). Microsoft has improved all four apps in Office 2004, as well as their integration as a suite. But as is typical of any collection of apps that does everything short of cooking your dinner, you'll end up using some features all the time while ignoring the rest.

Office 2004 Suite
One of Office's most useful features is the all-new Project Center, which enables you to organize files,

In Office 2004, you can browse recent documents in the Project Gallery.

email, contacts, and calendar items in one place: Entourage—although you can access overviews of your projects from any Office app. In Entourage, you set up a project by defining contacts, categories, files, and emails that you want to associate with that project, as well as two Watch Folders—one for files and one for email. Any files or messages you add to those folders automatically

ON THE
DISC
Office 2004 test drive

GOOD NEWS: Word's Notebook rocks. Improved email experience. Project Center is actually useful.
BAD NEWS: Still no integration with Apple apps. Minor bugs. Slightly sluggish performance.

MacAddict RATED
○○○○○
GREAT

A couple of other small but welcome additions: Project Gallery—that big ol' window that appears when you launch an Office app—is not just a huge annoyance anymore. You can now use it to access recent files rather than just a bunch of templates. Also, a new Check For Updates feature automates the process of downloading patches from the Web.
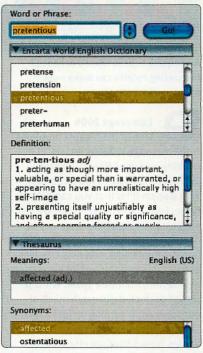
Word 2004

Word 2004 takes word processing to a whole new level. Chief among the new features is Notebook Layout view, which lets you organize your jots and tittles in a notebook-style layout, complete with tabs for differentiating subjects and line hierarchies that organize your notes much like an outline. The coolest part of Notebook Layout view is its audio notes feature, which lets you record audio as you type—great for lecture-hall or press-conference note-taking. We tested this feature using an iSight mic, and it worked great. Word keeps audio and typed notes in sync—every time you press Return, it time-stamps the audio so that if you want to play back the audio for just one section, you can.

A few beefs with Notebook: For one, the new Style pane on the Formatting Palette isn't available in Notebook Layout view. Also, the Notebook's outlining feature can get annoying, as it places bullets and other hierarchical symbols everywhere, even when you don't want them. Also, while you can transfer a set of audio notes between tabs, you can't transfer them to another document.

Word 2004 also has an improved Track Changes and Comments mode, making these features much less grating. Instead of displaying edits inline and comments in bubbles that appear when you roll over text, Word 2004 shuffles both off to the side in big, colorful balloons. Strangely, Microsoft has chosen to incorporate the new Track Changes And Comments formatting only in Page Layout view.

A few other features of note: The Reference Tools palette (available in the toolbox) lets you look up words, and displays both definitions and synonyms—nice, but no match for Sherlock's far more exhaustive

Dictionary channel. Navigation Pane builds upon the Document Map of yore, now adding the option to view thumbnails of all the pages in your document in a left-hand pane. Unfortunately, at times the thumbnails displayed only the squiggly red and green spelling and grammar underlines

Now we might actually use Word's dictionary and thesaurus.

The Scrapbook is a repository for images, text, and all of your other important junk.

and not the text, a problem that seemed to occur when our font was set to a small size. One final niggle: Although the performance difference isn't something you can time with a stopwatch, Word now feels a bit less responsive than the previous version.

PowerPoint 2004

While Word is a giant leap forward, PowerPoint 2004 takes a somewhat smaller step—it's better, but it won't blow you away. One of the best new PowerPoint features is the ability to apply multiple effects to an object (for example, a graph or bullet points). You can now set multiple entry, emphasis, and exit effects; in PowerPoint v. X you could only apply one effect on entry to a slide, one on exit. Also, aping Apple's Keynote, PowerPoint now offers several 3D transition effects, including—what else?—the revolving 3D cube.

PowerPoint 2004 also offers a new Presenter Tools feature, which is the equivalent to crib notes: notes to yourself that only you can see during your presentation. Plus, there's a new Shadow pane on the Formatting Palette that gives you more control over drop shadows. And perhaps one of the most welcome tweaks is the addition of more than 100 new template designs—and plenty of them actually don't suck! There's new clip art too, but much of that is only a little less horrible than before.
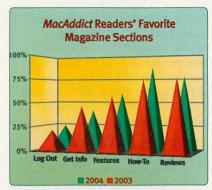
Excel 2004

Unless you routinely create charts—more on their enhancements in a moment—you won't find a slew of valuable new features in Excel 2004, although the app's improved text smoothing makes everything look noticeably better. The most useful new noncharting addition is an editable Page Layout view—it's the default view for new Worksheets, although you can change this in Preferences > View. In Page Layout view, what you see is what you'll get when you print your Worksheet—a capability we've wanted for years. You can adjust margins with an easy click-and-drag, and edit headers and footers in place. An enhanced Formatting Palette makes it more convenient to adjust print scaling and page orientation while in Page Layout view, as well as giving you one-click ▶

access to margin settings—these enhancements are also available in Normal view, but Page Layout view allows you to gauge their effects immediately. We've always appreciated the convenience of Page Break Preview view and are happy to see it didn't retire with the advent of Page Layout view.

Charting improvements, however, are the stars of this upgrade—though like many stars, Excel's charting can be a bit persnickety. On the plus side (the side where most new features reside), it's much easier to format a chart to your liking by using the Chart Colors, Lines, And Fills section of the enhanced Formatting Palette, which includes a wide selection of preset color schemes, plus line and fill options for quickly adjusting color, transparency, fill effects, and gradients, among others. The preset color schemes are a great idea, but their tiny color swatches and lack of organization and identification make them difficult to use. On the minus side, there is an assortment of bothersome bugs. For example, when you apply some options, they occasionally wipe out previous styling choices.

If you're not a chartoholic, you'll be pleased to know that Excel is still a superb number-cruncher. In fact, an improved function-syntax checker makes creating complex calculations easier than ever. New pop-up Smart Buttons provide quick access to formatting options when cutting and pasting, and point out formula errors. While we appreciated the error-assistance buttons, we found the Paste Options and Insert Options buttons intrusive, and turned them off in Preferences.

MacAddict Readers' Favorite Magazine Sections

■ 2004 ■ 2003

A few quick trips to Excel's enhanced Formatting Palette can make even mundane data attractive.

Entourage 2004

One of the biggest problems with Entourage v. X was its lack of a working junk-mail filter. Thankfully Microsoft has addressed this problem with a spam filter that you can set to None, Low, High, or Exclusive. We suggest Low. High placed almost all of our personal and business emails into the Junk folder, whereas Low was usually able to differentiate e-commerce newsletters from true spam. While it wasn't perfect, it did catch much of our spam while turning up just a few false positives. Of course, since it uses a rules-based filter, its effectiveness depends upon how skillfully Microsoft updates its rules.

Entourage also offers a new way to view email. Instead of previewing messages at the bottom, you can now set the preview pane to appear on the right-hand side of your messages list. It felt funky at first, but once we got used to the larger view, we appreciated the ability to preview far more of a message than before. Entourage can also sort

your message list by date so that today's emails are separated from yesterday's, and so on.

Another feature we suddenly can't live without: If your email window is minimized and you have MSN Messenger installed, a Messenger-style window appears in the corner whenever you receive a new message, displaying sender and subject info. Clicking the subject opens the message without calling forth the entire Entourage window; you can also delete the message with a single click. Also, if you use a major ISP such as MSN or .Mac, Entourage automatically uses that ISP's settings when you set up a new account so that you don't have to dig up your POP and SMTP server settings. Very cool.
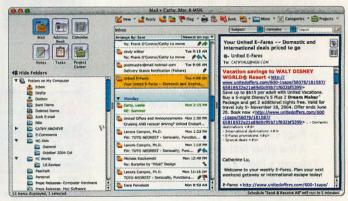
In fact, our only big gripe with Entourage is its lack of integration with Apple apps. Entourage lives in its own separate world from Apple's Address Book, iChat, and other apps, meaning that once again, we have to choose one standard and stick with it. Grrr.

The Bottom Line

Microsoft Office is the most potent productivity suite on the planet, and Office 2004 perpetuates its dominance. Sure, it's got its share of annoying quirks, bunglesome solutions, less-than-snappy performance, and weird behavior (such as display redraw issues in Entourage and Word), but it's still the king of productivity—just visit Help > Check For Updates regularly to download the inevitable bug fixes. Minor skanky bits aside, Office 2004 brings enough impressive new features to keep it at the top of its game.
—*Cathy Lu and Rik Myslewski*

Entourage's Project Center displays our calendar, files, and email by project.

Entourage's side-up email preview seemed wrong at first, but we quickly learned to love it.

EDITORS' MacAddict CHOICE

Two new air vents on the Xserve's front help keep the processors cool.

Xserve G5 Dual 2GHz

THE ULTIMATE MAC—A G5 SERVER

We thought the original Xserve was great, and the 2GHz Dual G5 Power Mac is simply awesome, so we had huge hopes for the Xserve G5. As we expected, Apple delivered the best of both worlds, cramming the mighty G5 and its advanced 64-bit architecture into the same 1U rack-mountable chassis.

Apple retained the best stuff from the Xserve G4: the easy serviceability, the sleek 1U rack form factor, the hot-swappable drive modules, and the righteous Mac OS X Server software (unlimited client license!), which makes setting up, monitoring, and administering servers and workgroups ridiculously easy. And the G5's 64-bit architecture fits right in: up to 8GB of ECC PC3200 DDR400 SDRAM (um, memory); a 1GHz bidirectional system bus; SATA hard drives, up to three of them (80GB or 250GB); and a buttload of thermal sensors. Pardon our crass language, but the new Xserve has 38 sensors inside, sensing the temperature in and around every component as well as the temperature of air entering and leaving the server. You can use the Server Monitor app to keep an eye on this information, but the Xserve doesn't need you—it adjusts its eight internal fans dynamically in response to the readings. This smart cooling helps make the Xserve G5 orders of magnitude quieter than its G4-based predecessor.

Apple makes the Xserve particularly attractive to scientists, multimedia producers, and others with high-performance computing needs. Need real power for a render farm or genome cruncher? Apple sells a Cluster Node Xserve ($2,999) with the same dual-G5 horsepower, but only one hard drive bay instead of three, no video card or optical drive, and a limited client license. Big-time scientists can pick up a gang of these nodes in the Apple Workgroup Cluster for Bioinformatics ($27,999 and up), a minirack prepacked with one Head Node Xserve and up to 15 Cluster Nodes,

GOT RAID?

The R in RAID stands for redundant, and Apple took that letter to heart, building backups of key components into this year's Xserve RAID. On this hefty beast's back you'll find two of everything: power supplies, fan-packed cooling modules, and network modules with Gigabit Ethernet and Fiber Channel connections. If one component fails, its backup is ready to step in, with one exception: The Xserve has two RAID-controller modules, but each is dedicated to seven specific drive bays. Unless you set up each group of drives as a RAID 3 or 5 array, with each array mirroring the other (aka RAID 31 or 51), the failure of a drive controller can cost you some uptime.

and bundled with custom software for high-science computing.

Apple's not blowing smoke regarding performance, either. In our processor-intensive QuickTime-encoding tests, the Xserve Dual G5 was noticeably faster than the 2GHz Dual G5 Power Mac: A file that took 2.5 hours to process on the Power Mac took only 2 hours on the Xserve. Chalk that up to the Xserve's slightly tweaked HyperTransport bus.

Throwing around big (10GB) files over Gigabit Ethernet, we hit speeds of over 50MB per second, but averaged 30 to 35 MBps—most hard drives can't handle data that fast. When we logged a few more Macs into the Gigabit party, we discovered our Dual 1.25GHz G4 wasn't holding things up. With three such G4s connected via Gigabit Ethernet, we still averaged 30 to 35 MBps throughput. Split between the connected Macs, that works out to about 10 MBps from the client Mac's perspective—not quite up to Gigabit Ethernet's theoretical 125-MBps potential, but tech standards (think FireWire, AirPort, USB) never hit their potential. For comparison, we tested a dual-2.8GHz Xeon server running Windows 2000 on the same network. It performed similarly—yet costs over three times as much.

Bottom line: If you have high-performance computing needs or are looking to set up a render farm, the Xserve is the perfect solution, with its rackability, connectivity, affordability, and raw power. We'd buy a platoon of 'em—if we only had a good excuse.
—*Niko Coucouvanis*

PHOTOGRAPHY BY SAMANTHA BERG

X̲ **COMPANY:** Apple
CONTACT: 800-795-1000 or 408-996-1010, www.apple.com
PRICE: $3,999

SPECIFICATIONS: Dual 2GHz G5 processors; 1GB ECC DDR400 SDRAM; 80GB SATA hard drive; dual Gigabit Ethernet; two 64-bit, 133MHz PCI-X slots; 24X CD-ROM

GOOD NEWS: Quieter than earlier models. ECC RAM and SMART hard drives keep everything copacetic. Unlimited client Mac OS X Server license.
BAD NEWS: Still no redundant power supply.

MacAddict RATED
○○○○○
AWESOME

Plasma2 System

ÜBERERGONOMIC CHAIR WITH MONITOR AND KEYBOARD STAND

Sitting in the Plasma2 System ergonomic chair and desk-stand combo, at least initially, gave our body some mixed signals. Its gray-coated steel and cast aluminum looked so much like a medieval torture device that our nerves were on edge. Once we adjusted the chair and sank down into its cushioned fabric, our muscles relaxed. Just as our initial reaction to the product was mixed, so is our final opinion of it after days of testing.

The Plasma2 System allows you to vary your working posture, freeing you from long, static poses that can cause aches and pains. Comprised of the Stance chair and the Plasma2 monitor and keyboard stand, the Plasma2 System lets you work in positions

...standing at nearly full extension...
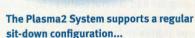
ranging from traditional sitting to near-standing. The Stance chair with attached footrest allows for six major body adjustments. You can adjust sitting height, sitting angle, reclining angle, armrest height, footrest distance, and the angle of the padded knee support. The Plasma2 stand holds your monitor (up to 80 pounds) and extends about a foot vertically. The attached angle-adjustable keyboard tray includes a swing-out surface for your mouse that you can attach to either side. At the system's most-expanded positions, you stand at a slight tilt with your monitor at eye level. At the other extreme, you can sit as you would in a normal desk and chair. Raising and lowering the motorized monitor stand is push-button easy, as is the chair's basic height adjustment.

Once we got used to the controls—and it took a few days—the Plasma2 did relieve our nagging left-shoulder and lower-back aches. We do recommend buying the small ($90) or large ($95) Telephone Holder if you're a gabber, because otherwise it's nearly impossible to answer your phone from the chair.

However, this brings us to our first gripe. This system works best if you don't move around during the day. Receptionists, data-entry clerks, and call-center employees should lobby their employers for the Plasma2 System. Raising and lowering the pair is easy enough, but if you routinely need to grab things from the other side of your desk, take frequent bathroom breaks, attend many meetings, or just generally move around a lot, you'll grow tired from the effort required to get into and out of this contraption.

Plus, adjusting certain portions of the chair, such

The Plasma2 System supports a regular sit-down configuration...

as seat height and footrest position, takes some muscle—the knee support is particularly awkward to adjust. Finally, fast adjustments can be dangerous. When we were near-standing and close to the monitor stand, quickly lowering the chair almost made our lips kiss a lot of steel. In the same position too close to the knee support, we were nearly pinned to the chair itself.
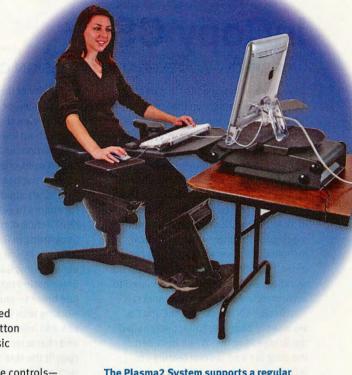
We wouldn't buy the Plasma2 System for ourselves—we can't afford two grand for a chair, we leave our desks often, and we're sensitive to "Take it to warp speed, Cap'n!" jokes from our style-conscious friends. But if you're an employer whose minions are stationary at their computers for long days in a row, this rig will ease their aches and pains—and it's a lot cheaper than workers' comp.
—*Narasu Rebbapragada*

...and any angle in between.

COMPANY: HealthPostures
CONTACT: 925-873-3330, www.plasma2system.com
PRICE: $2,195

REQUIREMENTS: None

GOOD NEWS: Comfortable. Adjustable. Alleviates muscle strain.
BAD NEWS: Requires muscle strength. Expensive. Difficult to get in and out of.

MacAddict RATED
●●●○○
SOLID

InCopy CS

WORKFLOW-ACCELERATING INDESIGN COMPANION APP

If you're a writer or editor in a deadline-challenged workgroup that uses InDesign CS for page layout, there have probably been times when you couldn't edit a story because a colleague was working on the layout in InDesign. Enter InCopy CS, essentially a subset of InDesign's multitudinous features that lets writers and editors work on text in an InDesign INDD document while a designer simultaneously works on the same document's layout. It's not a perfect solution, but InCopy sped up our workflow enough to make us inclined to accommodate the app's few quirks.

InDesign CS is linked to InCopy CS via a set of plug-ins, collectively called the Bridge Plug-ins. When installed, the plug-ins add several features to InDesign, mainly the ability to export InCopy stories and to check out, check in, and update modified stories.

After you export a story, that story is listed in InDesign's Links palette along with linked graphics. You can then open the InDesign document in InCopy and check out individual stories via the Story List palette—and if the InDesign document contains more than one story, multiple InCopy users can open the InDesign document simultaneously. After you check out a story, you can work on the text in any of three display modes: Story, Galley, or Layout.

Story view displays unformatted text without line breaks or layout information, and works great in high-speed word-crunching environments such as the newspaper business. At last, artists don't have to wait for editors to get their text just right before digging into layout. Copyfitting in Galley view is InCopy's raison d'être, and it's an absolute joy. Galley view displays unformatted text with accurate line breaks—and in addition to working with the text of an article, you can add inline notes, apply paragraph and character styles, track changes, and copyfit the text so that it fits precisely within its allotted space. Finally, Layout view displays a story exactly as it's displayed in the InDesign document that contains it—great for an editor's final proof. However, although you can copyfit text in Layout view, text that does not fit in a text frame doesn't appear.

In addition to its display and copyfitting capabilities, InCopy has several handy features that made our writing and editing easier, including an interactive spelling checker, a thesaurus with synonyms and antonyms, the option to create text macros so you can quickly add commonly used text
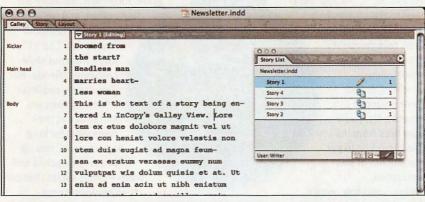
InCopy lets us tweak text all the live-long day without fouling up the art director's layout, and thereby his peachy disposition.

strings (such as boilerplate text), and all of the typographic features available in InDesign (including tables, nested styles, and OpenType support). In addition, the interface is customizable, so you can configure display options in Galley and Story views, show or hide controls in palettes, drag and dock toolbars, and save your arrangements as custom workspaces.

We dig InCopy, but it's not flawless. For example, when you export a story, all frames linked to the selected frame are included, and there's no other option. If an InDesign layout includes separate frames—for example, one for the headline, several for the body text, and one for a photo caption—you have to save each component as a separate story. Also, the work flowed smoothly on our pure AFP (AppleShare) server but not on a mixed-client Windows 2000 server. Your mileage may vary.

Adopting InCopy will require some changes to any established workflow, but the benefits—smoother production cycles and peace between artists and editors—can be huge.—*John Cruise*

InCopy's Galley view lets you easily trim text to fit the layout.

GOOD NEWS: Speeds up workflow. Makes copyfitting and other editorial tasks easy.
BAD NEWS: Can't include multiple unthreaded text frames in a story. Limited to small workgroups.

MacAddict RATED
○○○○○
GREAT

InDesign CS PageMaker Edition

HANDY FAUX-PAGEMAKER INDESIGN KIT

PageMaker, the application that sparked the desktop publishing revolution almost 20 years ago, has now been put out to pasture—Adobe recently announced it won't develop any more PageMaker updates, leaving InDesign CS as the company's sole page-layout offering. But fret not, PageMaker fans: InDesign CS PageMaker Edition is a gang of plug-ins that brings many of PageMaker's unique and useful tricks to InDesign, taking nearly all of the pain out of migration.

InDesign CS PageMaker Edition is available as a full version of InDesign ($349) for those upgrading from PageMaker, or as the PageMaker Plug-in Pack ($49) for InDesign CS owners or early Adobe Creative Suite buyers—the Plug-in Pack is now included as part of the Creative Suite. The features it adds include PageMaker keyboard shortcuts and toolbars; a position tool for resizing, cropping, and moving graphics; automatic bulleted and numbered lists that auto-update when you make changes; a Template Browser (similar to Photoshop's File Browser). It also provides a DataMerge palette for merging data from a spreadsheet or database into InDesign layouts; InBooklet SE for rearranging the pages of a facing-page document into printer spreads; and the publication converter for opening PageMaker 6 documents. (Without the Plug-in Pack, InDesign CS opens PageMaker 6.5 to 7.x documents only.)

InDesign CS PageMaker Edition comes stocked with good-looking, professionally designed templates.

All in all, you get a solid list of features that make an already powerful program even more so. PageMaker users will need to ask themselves, "Should I stick with my current version of PageMaker on Mac OS 9 and have us grow old together, shell out $945 for QuarkXPress 6, or purchase InDesign CS PageMaker Edition for $349?" All decisions should be so easy.—*John Cruise*

COMPANY: Adobe Systems
CONTACT: 800-833-6687, www.adobe.com
PRICE: $349 (InDesign CS upgrade from PageMaker), $49 (PageMaker Plug-in Pack)
REQUIREMENTS: G3, Mac OS 10.2, 128MB RAM, 587MB disk space
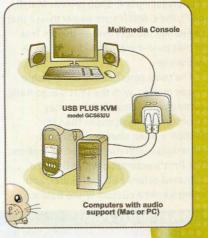
GOOD NEWS: Useful features, interface additions for PageMaker and InDesign CS users.
BAD NEWS: Should be a free upgrade.

MacAddict RATED
○○○○○
GREAT

C-8080 Wide Zoom and PowerShot Pro1

TWO 8-MEGAPIXEL PROSUMER CAMERAS

If you still don't grok the term *prosumer*, this new pair of 8-megapixel digital point-and-shoot cameras may educate you. Olympus's C-8080 Wide Zoom and Canon's PowerShot Pro1 provide twice the pixel acreage most consumers really need, extra zoom (5x and 7x, respectively), and black polycarbonate bodies for that sturdy, real-camera feel. Both cameras provide no-brainer scene modes and full manual control, but lack the speed and lens options of a digital (or film) SLR camera. If you're looking for a camera to grow into—or can't talk yourself into dropping *more* than a grand—they might be just your cup of pixels.

The C-8080 offers ten shooting modes, most of which allow for customization, and one user-settable mode. The Pro1 includes ten modes as well, but let us program two of our own custom settings. Both cameras are guilty of multilevel menus, which were mostly indecipherable until we spent a good amount of time fiddling with the cameras, manuals in hand. The Canon's menus are similar to those of other PowerShots, however, so they're easy to use if you've had experience with recent models. While the C-8080's controls deviate from those of earlier Wide Zoom models (see our C-5060 review, Mar/04, p47), the C-8080's are easier to use than the earlier models' were—there's less of that push-here-while-dialing-there nonsense.

The two cameras have comparable image quality, with the Pro1's automatic settings providing slightly better exposures in most cases than the C-8080's when shooting in similar situations—with one oddball exception: The Pro1's automatic White Balance captured colors a little off-kilter, and when we set a custom White Balance

ourselves some colors were even less accurate—the differences were slight, but noticeable. The C-8080 also proved better in shooting at higher ISO speeds under low-light conditions—which creates noisy images in most digital cameras—but both cameras shot

relatively cleanly in our low-light tests.

Both cameras also support shooting in RAW mode, a direct data dump from the CCD with no compression or adjustments applied, which creates files that have to

be "developed" in an appropriate image converter. Both cameras provide the respective company's RAW-conversion software, but we prefer Adobe Photoshop CS—even though we had to download the updated Camera Raw plug-in from Adobe's Web site. For the

Canon packs 8 megapixels into the Pro1's svelte body.

The Pro1's Super Macro mode is super indeed—we could have gotten even closer, but it was windy.

life of us, though, we couldn't get the C-8080 to stay in RAW mode after powering down, which was a drag.

Once you get your settings figured out, you can shoot bursts of photos with either camera—the internal buffer stores images and writes them out to the memory card as fast as it can, and how quickly the buffer fills up depends on the image resolution. One RAW file fills the C-8080's buffer up completely, while the Pro1 took about four RAW shots before it started to choke. Using JPEG format allowed nearly continuous shooting with

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POWERSHOT PRO1

COMPANY: Canon
CONTACT: 800-652-2666, www.canonusa.com
PRICE: $999 ($800 to $850 street)
REQUIREMENTS: Power Mac with built-in USB, Mac OS 9.0 or 10.1 or later

GOOD NEWS: Performs well in auto and manual modes. Superclose macro focusing. Big, fast memory buffer.
BAD NEWS: Opaque menus. No focus-assist light. Weird focus ring.

MacAddict RATED
○○○○○
GREAT

the Pro1, whereas the C-8080 slowed down considerably after the first couple of shots. If speed is crucial to you, stop reading now and go buy the Pro1.

Zoomwise, the Pro1's 8x zoom goes from the 35mm equivalent of 28mm to 200mm and can focus as close as 1.3cm in Super Macro mode. The C-8080's 5x wide-zoom lens can focus on objects as close as 20cm, and its zooming capabilities range from the 35mm

Olympus's C-8080 Wide Zoom lives up to its name.

The C-8080 can't get as close as the Pro1, but in this case we're OK with that.

equivalent of 28mm to 140mm. At the wider end of focal lengths, depth of field increases dramatically, and with a small enough aperture we were able to get shots in focus from close foreground to

distant background with either camera at wide zoom settings. The zooming action is motor driven in both cameras; however, the Canon uses an old-school zoom-ring trigger that's as responsive as any motor-driven zoom but not even close to what a strictly manual zoom ring can achieve. The zoom ring might make you look more like a real photographer, but we hated using it when trying to shoot one-handed.

At 23.3 ounces, the C-8080 is a bit bulkier than the 19.2-ounce Pro1. Both have an enlarged grip on the right-hand side that assures comfortable and secure handling. The Pro1's swivel-anywhere LCD is infinitely more versatile than the C-8080's screen, which only angles up and out away from the camera. Aside from letting you pretend you're using a twin lens reflex—looking down at the camera while shooting forward—the LCD display's limited range of movement makes it not terribly useful. The Pro1's screen flips wherever we want it: tucked in toward the camera body for transport, turned down for over-the-crowd shots, or facing forward for self-portraiture.

Both cameras have a slot for CompactFlash cards (both Type I and Type II) and MicroDrives, but the C-8080 also includes simultaneous support for Olympus's teeny xD-Picture Cards. The write speed isn't noticeably different, with the CF cards barely measurably faster. Annoyingly, the C-8080 defaults to xD if you have both cards installed in the camera, even if the xD card is full—but switching over to CompactFlash is easy. Both cameras earn points for

WHAT OF THE COOLPIX 8700?

The Pro1 and C8080 aren't the only $999 8-megapixel cameras around. Nikon's Coolpix 8700 (*Reviews*, June/04, p52) is another pea in this prosumer pod—and we gave it the same 4-widget rating. Packing 8 megapixels and an 8x optical zoom, the Coolpix provides the most zoom. It also has an omnipositionable LCD screen that moves like the Pro1's (but doesn't look as good); an autofocus assist illuminator; 12 scene modes with two user presets and full manual override; RAW, TIFF, and JPEG support; and a fine-tunable flash. It shows some image noise at higher ISO ratings, and—our main complaint—its wimpy memory buffer made us wait for the camera to write its honkin'-big images to the media card. Pokiness aside, any Coolpix fan will love the 8700.

Another great 8-megapixel candidate: the Nikon Coolpix 8700.

their media-slot and port coverings, which are made of hard plastic and feel sturdier than most we've seen.

The Pro1 would be our choice if we had to decide between the two, due to its slightly wider focal range, more thorough manual (which you *will* need), compactness, and sturdier feel. We'll learn to love the zoom ring and live with the slightly off-kilter White Balance—what's Photoshop for, anyway? The C-8080 has its good points and would probably be a better choice for a big-handed Olympus diehard.—*Paul Yoon*

C-8080 WIDE ZOOM

COMPANY: Olympus
CONTACT: 888-553-4448, www.olympusamerica.com

PRICE: $999 ($750 to $775 street)
REQUIREMENTS: USB-equipped Mac, Mac OS 8.6 or 10.1 or later
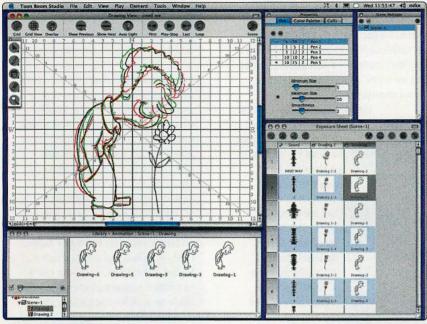
GOOD NEWS: Performs well in auto and manual modes. Wide zoom lens creates mongo depth of field.
BAD NEWS: Limited-motion LCD. User settings don't stick. Weak buffer foils burst mode.

MacAddict RATED
○○○○○
GREAT

Toon Boom Studio 2.5

NIFTY CARTOON-ANIMATION SOFTWARE

Toon Boom Studio's expansive interface is nearly as intuitive as your friendly old drawing board and light table.

Anyone who's ever put pencil to paper to create traditional cell animation can tell you it's an incredibly time-consuming process. However, given a Mac, a Wacom graphics tablet, and Toon Boom Studio 2.5, cartoonists and animators—even those with little or no computer experience—can easily digitize their workflow to speed up production time and find a place for their work in the

Toon Boom Studio is worth every penny it costs.

increasingly digital animation industry.

Toon Boom is still intended mainly for Web animation, but Flash's SWF is not the only format it can export. Now, you can also pipe your 'toons into any QuickTime-compatible format, including raw DV and AVI, as well as numbered image sequences such as TIF, TGA, and PNG. This capability allows you to create an

ON THE DISC
Toon Boom Studio 2.5 demo

animated scene once, and then export it as SWF for the Web, MPEG-2 for DVD, and PNG for printed collateral.

We're long-time Toon Boom fans (see *Reviews*, Nov/01, p62), and one of our few complaints about the original version was its lack of alpha-channel support. Alpha channels are essential for compositing clips together in programs such as After Effects or Final Cut Pro, and the lack of alpha-channel support prevented many Mac artists from fully embracing Toon Boom. With the release of version 2.5, however, Toon Boom supports alpha-channel masking in QuickTime, AVI, and image-sequence exports.

Another major new addition is Toon Boom 2.5's

The Library has handy features, including a nested hierarchy of your animation and its scenes, and a live-action preview window.

support for embedded scanning from TWAIN-compliant scanners, which is great news for those who lack a graphics tablet or are not comfortable drawing with a mouse (that is, almost everybody). Not only will it handle scanning, Toon Boom can also convert your scanned bitmap image into vector line art that you can resize, tweak, or animate at will. Toon Boom has an import dialog with intuitive controls for managing the conversion's basic settings, such as line width and threshold, and it's capable of batch-converting multiple scans or imported files—a feature that can save you gobs of time.

Toon Boom 2.5 also has plenty of small improvements that bring us great joy. For example, you can finally use the eraser on your Wacom tablet's pen—pressure-sensitivity included. With or without a tablet, you can draw directly in Toon Boom's 3D Sceneplanning mode rather than in a separate Drawing window as before. Also, when you scrub the playhead across the timeline to watch the animation, you can now hear the soundtrack—though we wish we could scrub the timeline while in Drawing mode.

Flash users will understandably wonder how Toon Boom handles scripting and interactivity. The answer is simple: It doesn't. Toon Boom is not an application for authoring interactive content and Web apps; it's a tool for creating traditional-style, hand-drawn, linear animation—and Toon Boom smokes Flash at pure animation. However, Toon Boom integrates well with Flash in that you can create an animation in Toon Boom, export it as a SWF file, and then bring it into Flash for further drawing or painting, or for adding interactivity.

Whether you use it alone or as the animation muscle in larger Flash projects, Toon Boom Studio 2.5 is worth every penny it costs. If you're creating or converting traditional animation into any digital format, Toon Boom should be a part of your palette. (Acme anvil not included.)—*Mike Caputo*
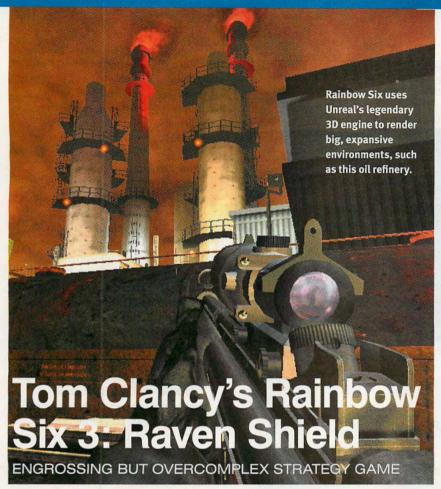
COMPANY: Toon Boom Technologies
CONTACT: 514-278-8666,
www.toonboom.com
PRICE: $374, $199 (upgrade)

REQUIREMENTS: G4 (G5 recommended), Mac OS 10.3, 256MB RAM (512MB recommended), 100MB disk space, Wacom tablet recommended

GOOD NEWS: Supports painting in Sceneplanning mode. Audio scrubbing. Alpha channels.
BAD NEWS: Interface requires lots of space. Still can't scrub animation in Drawing mode.

MacAddict RATED
○○○○○
GREAT

Rainbow Six uses Unreal's legendary 3D engine to render big, expansive environments, such as this oil refinery.

Tom Clancy's Rainbow Six 3: Raven Shield

ENGROSSING BUT OVERCOMPLEX STRATEGY GAME

Rainbow Six 3: Raven Shield is the latest tactical, squad-based shooter inspired by Tom Clancy's love of all things military. Your job: lead a crack squad of up to eight antiterrorist specialists, dividing them into three fire teams that you'll coordinate as you walk among them, part of the action. Together, you'll be the unannounced, unwelcome guests of terrorists in every corner of the globe—each corner rendered beautifully thanks to the Unreal Tournament 3D engine.

Realism is the name of the game in Rainbow. One example: As in the real world, your soldiers are mere mortals who drop like sacks o' taters when shot. And since you can't do everything yourself, surviving a mission means being smart about using your teams to cover different firing angles, distract unsuspecting targets, or just plain watch your back as you sneak around, real quiet-like.

ON THE DISC
Rainbow Six 3: Raven Shield trailer

All this creates a slow, thoughtful style of play, very different from your garden-variety shooters like Quake or Unreal Tournament. You rarely rush in, guns blazing. Instead, you move cautiously, keeping low, carefully scanning for bad guys and then deciding how to use your teams for deadliest results. In fact, the act of actually shooting bad guys (or blowing them up—you've got grenades, mines, rockets, and other fun toys) is usually

Your squad mates can definitely carry their own weight on the battlefield—but only if you put them into strategic positions.

over in a few quick moments.

If this doesn't sound fun, think again. With its slow pace—like a baseball game tied in the ninth inning—Rainbow builds suspense and tension like no other shooter. Every move counts; one careless move around a corner or into an exposed clearing can mean suddenly losing two or three team members. The result: We regularly found ourselves at the edge of our seats, leaning into the screen, taking controlled breaths with our eyes drying out from lack of blinking.

On the other hand, achieving this sublime stress means scaling a steep learning curve first—there's a lot to do before you can start having real fun. For starters, you start each mission by choosing different soldiers from a large pool, so you have to exercise some brain power as you analyze whose weapons and skills will deliver the best butt-kicking in battle. (Bonus replay value: Pick different soldiers and try again.) But the major stumbling block is Rainbow's approach to controlling your teams. Before starting a mission, the game encourages you to actually sketch out your attack plan on a map, designating where each team will move and setting check points where they'll temporarily stop and perform an action. We're sure this is good, responsible planning in the real world of counterterrorism, but in a game, it can be a wee bit overwhelming.

Luckily, you can choose to skip the preplanning and direct your teams once you're on the ground. However, although Rainbow's interface is now more streamlined than in earlier versions, you still have to master a whole lot of keyboard commands before you get the hang of things. We couldn't help yearning for the approach taken by Tom Clancy's Ghost Recon, which also lets you control fire teams, but without quite so many options.

In the end, we had fun with Rainbow Six 3, and its realistic approach to battle made for some totally immersive moments. But its difficult learning curve will definitely be a stumbling block if you just want to open the box and have fun from the get-go.—*Helmut Kobler*

COMPANY: Aspyr Media
CONTACT: 888-212-7797 or 512-708-8100, www.aspyr.com
PRICE: $49.99

REQUIREMENTS: G3 733MHz or faster, Mac OS 10.2.6 or later, 256MB RAM, 32MB VRAM, 1.9GB disk space

GOOD NEWS: Realistic approach to combat creates gripping tension and suspense. Beautiful detail.
BAD NEWS: Network support only for Mac-to-Mac gaming. Interface can be confusing.

MacAddict RATED
●●●○○
SOLID

EDITORS' MacAddict CHOICE

SketchUp

EASIEST 3D-DESIGN SOFTWARE EVER

Though it may look like it, SketchUp is *not* CAD (computer-aided design) software, which is what architects and engineering designers use to draw houses and other objects precisely —and that's good. SketchUp spares you the endless palettes of arcane CAD tools, which is just the ticket if you want to jump right in and design your dream house. Even working architects would do well to sketch their ideas in SketchUp rather than bust out fat ol' AutoCAD (a $3,470 CAD app for Windows) for conceptual work.
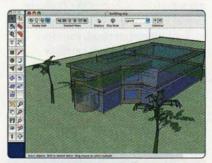
To create a basic house, you start with the pencil tool. Draw an outline of your building (you'll be viewing downward as if facing the ground), and SketchUp will display the lengths of the lines you draw, giving you an idea of the dimensions while you're sketching. You can ignore the line lengths altogether or you can manually type in the lengths as you create lines—you can design as loosely or as accurately as you want.

A useful and integral modeling feature

ON THE DISC
SketchUp 3.1.32 trial

in SketchUp is its inference guidance system, which displays visual indicators (inferences) that help you navigate and create objects in 3D space. Because your Mac's display is a 2D plane, it's not

Here we turned our building materials transparent so we can see the interior.

easy to locate, for example, the midpoint of a line on a given plane, especially if you're viewing in isometric, or angled, view. With inferences, when you drag your mouse over the edge of an object, a cyan dot will appear when you reach the midpoint of that edge. When you want to create a line from that midpoint to the midpoint of another edge, the

SketchUp's smart tools helped us design this house in under ten minutes.

inferences will clue you in on what axis (x, y, or z) you'll be drawing on, as well as the precise location of the second edge's midpoint, and your drawn line will snap to the nearest highlighted dot. These inferences banish nearly all of the pain traditionally associated with beginning 3D modeling.

By default, your sketches have a cartoonish, Magic Marker look that's ideal for getting your basic idea across. If you want to see more, an X-ray transparency mode reveals hidden lines and objects, so you can view the interior structure and detail from outside. For maximum disclosure, the section plane tool can cut through a whole model, creating a cross-section view without altering the model; you can move and rotate the cross-section plane at will.

Another cool tool is the draw dimensions tool, which displays the length of edges, curve radii, and diameter—and it couldn't be any simpler to use. Just click and drag a straight or curved edge. Because SketchUp renders the objects you create in real time, you can modify the geometry and the dimensions will change accordingly. 3D isn't supposed to be this easy.

Even professional designers and architects can use SketchUp, since it can export editable 2D DWG files for AutoCAD and EPS files for Illustrator, as well as 3D AutoCAD DXF and 3DS (3D Studio Max) files that you can open in high-end 3D applications such as LightWave or Cinema 4DXL for photo-realistic rendering.

On the downside, you may find inference-snapping a bit restrictive—and there's no option to turn it off. We'd be happier with a modifier key to disable inferences temporarily while creating models. We'd also like an antialiased-view option, as the onscreen sketch lines appear jaggy—but it's not a deal-killer, since SketchUp can antialias images upon export. Although it's a bit pricey, SketchUp's versatility and ease of use fully justify its cost.
—*Andrew Tokuda*

COMPANY: @Last Software
CONTACT: 303-245-0086, www.sketchup.com
PRICE: $475

REQUIREMENTS: 400MHz G4, Mac OS X 10.2 or later, 128MB RAM, 20MB disk space; OpenGL 3D video hardware recommended

GOOD NEWS: Ridiculously easy to use. Plays nice with pro CAD tools.
BAD NEWS: Can't disable snap-to view. No antialiased working view.

MacAddict RATED
○○○○○
AWESOME

Big Disk Extreme and Bigger Disk

FAST, MEGACAPACIOUS EXTERNAL HARD DRIVES

Just like ready cash and RAM, hard disk space is something you can't have too much of—a philosophy to which LaCie certainly adheres. Witness its two newest hard drives: the 500GB Big Disk Extreme and 1-terabyte Bigger Disk. The 500GB Big Disk Extreme differs from LaCie's original 500GB Big Disk (see *Reviews,* Apr/03, p58) in the way its two internal 250GB drives are linked. In the earlier Big Disk, the two drives were *spanned*—that is, firmware fooled your Mac into thinking those two drives were just one big, happy volume. The new Big Disk Extreme earns its extremity by using Oxford Semiconductor's new 912 *bridge*—a chip that allows drives to communicate with your Mac over FireWire 800. Among other performance-enhancing improvements, the 912

The Big Disk Extreme uses clever engineering to achieve great performance.

adds the ability to *stripe* the two drives inside the Extreme—which means it simultaneously sends half your data to one drive and half to the other.

The Bigger Disk has a different goal in mind: bulk. Inside it are four 250GB drives, spanned into one gigantipacious 1-terabyte volume. To get an idea of how big a terabyte is, remember that the original Mac back in 1984 had a single 400KB floppy—the Bigger Disk can hold as much data as 2.5 million original Macs.

What mere mortals could possibly need that much storage space? We can think of a few: people who want to store a CD collection in its original pristine AIFF format, not as MP3 files; security-conscious folks who want to archive an entire office's files quickly and store that backup off-site; videographers who want to keep scads of creative content immediately accessible. One thing's for sure, though—if you're going to trust a boatload of data to a Bigger Disk, we recommend a religious backup regimen.

The Bigger Disk uses an Oxford 922 bridge to feed its ports: two FireWire 800, one FireWire 400, and one USB 1.1 and 2.0. The Big Disk Extreme eschews the USB port. Both drives are housed in LaCie's top-notch aluminum d2 case, which both protects their innards and helps dissipate heat.

As expected, our testing showed the Bigger Disk to be slower than the Big Disk Extreme, and about 20 percent slower than the internal drives of a Dual 1.25GHz Mirrored Drive Door Power

There's no bigger desktop drive than the 1-terabyte Bigger Disk.

Mac G4 and a Dual 2GHz Power Mac G5—typical FireWire 800 performance. The Bigger Disk, like other FireWire 800 drives, performed marginally faster when connected to the G4—apparently Apple is still working the bugs out of FireWire on the G5.

On the Big Disk Extreme, duplicating files—both large and small—was about 15 percent faster than on a Power Mac G5's stock internal drive. The most impressive performance boost showed up in the popular benchmarking utility Xbench, which demonstrated the Big Disk Extreme to be 20 percent faster on average than the internal drives of both a Power Mac G5 and a G4—and 10 percent faster when connected to a Power Mac G4 than when hooked up to a Power Mac G5.

Nice drives. The Big Disk Extreme provides excellent performance and a big ol' chunk of storage space; the Bigger Disk is one heck of a well-engineered desktop terabyte. Whatever your storage needs, LaCie's newest drives have you covered.—*Rik Myslewski*

BIG DISK EXTREME

COMPANY: LaCie
CONTACT: 503-844-4500, www.lacie.com
PRICE: $549 as tested (500GB)

REQUIREMENTS: FireWire 400, Mac OS 9.x or 10.x or later; FireWire 800, Mac OS 10.2.4 or later

GOOD NEWS: Excellent performance. Impressive capacity.
BAD NEWS: Nothing worth mentioning.

MacAddict RATED
●●●●○
GREAT

BIGGER DISK

COMPANY: LaCie
CONTACT: 503-844-4500, www.lacie.com
PRICE: $1,199

REQUIREMENTS: FireWire 400, Mac OS 9.x or 10.x or later; FireWire 800, Mac OS 10.2.4 or later

GOOD NEWS: Mind-boggling capacity.
BAD NEWS: Pedestrian performance.

MacAddict RATED
●●●●○
GREAT

Frodo, secretly bearing the One Ring, and Samwise fight their way toward the Crack of Doom.

Lord of the Rings: Return of the King

FAST-PACED, GORGEOUS ACTION GAME

Peter Jackson's film adaptation of J.R.R. Tolkien's *The Lord of the Rings: The Return of the King* comes in game form to the Mac—and it's filled with the same high-speed action, chaotic battles, and cinematic scenes as the fantasy film trilogy. Compared to other film-inspired games we've seen, this one makes the most of its movie tie-in: Each level begins and ends with a montage of action from all three films, some of which is exclusive to the game.

As you'd expect, the goal of the game is to destroy the One Ring by hurling it into the Crack of Doom, thereby releasing Middle Earth from the suffocating grasp of the Dark Lord Sauron. You can play as any of the film's main characters, including Gandalf, Aragorn, Legolas, Gimli, Frodo, or Samwise. As in the movie, Gandalf and the hobbits take different paths to get to Mount Doom, and Aragorn, Legolas, and Gimli take a third—it took us weeks to play all the characters through each of the game's 13 levels.

The game opens with a cut scene of the battle of Helm's Deep, which morphs into the game itself—you suddenly find yourself playing Gandalf, knee-deep in orcs and fighting for your life. After surviving this initial, relatively easy battle, you choose your own

ON THE DISC
The Return of the King trailers 1 and 2

The game opens with you—Gandalf—knee-deep in the battle of Helm's Deep.

path—continue along as Gandalf, or switch to playing another character with all of his requisite foes, challenges, strengths, and fighting strategies. Regardless of which character you play, you'll fight until you're dizzy. The enemy comes at you in scores, whether you're escaping from Osgiliath or battling the forces of Lord Sauron at Pelennor Fields. A solid arcade combat system uses customizable keystrokes for attacking fast and fiercely, parrying moves, and dealing out final death blows to your enemies. The classic sword-through-the-prostrate-foe's-chest move never gets old.

Return of the King uses an experience-point system based on quality, not quantity. There are oodles of orcs to kill, but simply hacking a foe to death gets you 75 experience points, whereas

finessing him with combinations of moves earns upward of 600 points. Not only do these points propel you through levels, you can also use them to buy extra powers and attack moves.

Though the game is designed for single play, a cooperative mode allows you to team up with a friend. There's no Internet or LAN support, which means the two of you will have to plug in a second gamepad and crowd around the same monitor—but hacking and slashing your way through Middle Earth with a human comrade instead of a sometimes sheeplike computer-controlled character makes the game much more fun.

Hobbitheads will love this game on principle. RPGers will lament the game's linear structure but appreciate the replay value of character-hopping. And even if you're too cool for the Dungeons and Dragons or hobbit rigmarole, Return of the King's fast-and-furious combat, gorgeous eye candy, and immersive sound make for some truly enjoyable arcade-style action.—*John Lee*
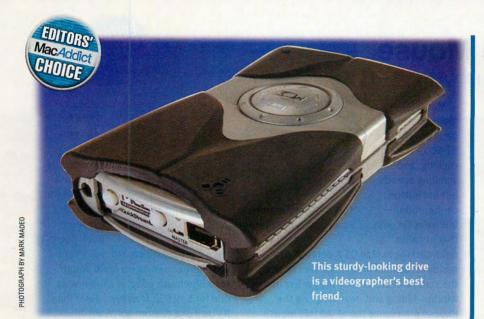
TIP By switching characters frequently in Lord of the Ring: Return of the King, you can build up all of the characters' respective experience points and even out the odds in the final showdown against Sauron's hordes of orcs.

COMPANY: Aspyr
CONTACT: 512-708-8100, www.aspyr.com
PRICE: $49.99

REQUIREMENTS: 800MHz G4 or faster; Mac OS 10.2.6 or later; 256MB RAM; ATI Radeon 7500, nVidia GeForce 2, or better; 32MB VRAM; 2.2GB disk space; DVD drive

GOOD NEWS: Addictive action. Awesome battle effects. Superior graphics and audio. Deeply tied to *LOTR* movies.
BAD NEWS: Linear structure. Limited multiplayer mode. May induce hobbit overload.

MacAddict RATED
○○○○○
GREAT

This sturdy-looking drive is a videographer's best friend.

QuickStreamDV

TIMESAVING DV-CAPTURING HARD DRIVE

We hate waiting. That's why we dig DV-capturing hard drives such as the QuickStreamDV. These drives convert raw video footage from your DV camera into DV, MOV, or AVI format for editing on the Mac—and they do the conversion on the fly. As a result, you can immediately get to work editing in Apple Final Cut Pro or Express (or in Avid Xpress Pro, Apple iMovie, or almost any video editor), instead of waiting for that software to convert your footage. The QuickStreamDV sweetens the deal with solid performance, capable StreamManager software, and a rugged design that incorporates a standard tripod mount and an adapter for securing the drive in your camera's hot shoe.

We used the included four-pin-to-six-pin FireWire cable to tether the QuickStreamDV to our reliable ol' Sony DCR-TRV900—the drive supports MiniDV, DVCAM, and DVCPRO, as well as both NTSC and PAL television formats. Changing the QuickStream's capture format requires watching the drive's

status lights for a certain pattern and remembering which pattern indicates the format you've selected—MCE was smart to include a laminated setup guide, which makes configuring the drive in this way a simple task.

The 40GB QuickStream we tested recorded three hours of footage happily—the drive's internal LiIon battery, however, lasted only about half as long. Back at the Mac, we used a six-pin-to-six-pin FireWire cable (also included) to connect the QuickStreamDV to our Mac, and dragged the MOV and DV files straight into iMovie. The device even breaks footage into manageable 2GB, 10-minute chunks without losing a single frame of the action.

The QuickStreamDV responds to your video cam's Record button, but the drive also has its own Record button, so you can record to the QuickStreamDV whether you have DV tape in the camera or not—a nicety that makes this our favorite DV-capturing drive yet.
—*Niko Coucouvanis*

COMPANY: MCE Technologies
CONTACT: 949-458-0800,
www.mcetech.com
PRICE: $729 (three-hour, 40GB model)

REQUIREMENTS: FireWire-equipped Mac, Mac OS 9 or 10.2 or later, DV camera

GOOD NEWS: Records editable DV directly from DV cam. Works with or without DV tape.
BAD NEWS: Expensive.

MacAddict RATED
●●●●○
GREAT

SportSuit Runabout

'80S MACHO WRISTBAND IPOD CARRIER

With fond memories of '80s rocker Billy Idol and his signature black wristband, we hate to love Marware's SportSuit Runabout—but we can't help ourselves. Part utilitarianism, part guilty pleasure in black neoprene and plenty of Velcro, the Runabout goes for about the same price as Apple's iPod mini Arm Band ($29, www.apple.com).

The Runabout provides a few advantages over Apple's strap, mainly in surface protection; clear plastic covers the mini's LCD screen and neoprene covers all four corners. This coverage slightly impinged on our access to the Hold switch, though it's just neoprene, so that's no biggie. You insert the mini

This sporty little black suit reminds us of Billy Idol's "White Wedding."

via a slit on the back of the strap, so you can access the mini's Dock Connector without removing the device from its 'Suit.

Sure, we experienced some snickering from the fashion-snob gallery, but we know they're just jealous of our iPod mini. Depending on your own sense of style, the Runabout is either garish or great, but it does its job as advertised.
—*Niko Coucouvanis*

COMPANY: Marware
CONTACT: 954-927-6031,
www.marware.com
PRICE: $29.95

REQUIREMENTS: iPod mini, maverick sense of style

GOOD NEWS: Completely functional.
BAD NEWS: Makes you look like an '80s dork.

MacAddict RATED
●●●○○
SOLID

BT-500 Mobile Mouse

SWEET LITTLE BLUETOOTH MOUSE

To achieve the august rank of Top Travel Mouse, a rodent must meet several requirements: Bluetooth connectivity, for one, is a must, since all current PowerBooks come with Bluetooth built in. Also required are a scroll wheel and more than one button (are you listening, Steve?), smooth-tracking action, travel-friendly dimensions, and impeccable design. The BT-500 fits the bill perfectly.

Weighing barely more than the two (included) AAA batteries that power it, the diminutive BT-500 is slightly pear shaped, with a bulbous rear end that's easy to grab with the thumb and ring finger, leaving the index and middle fingers free to work the left and right buttons, as well as the clickable scroll wheel.

Mac OS X's Mouse preference pane governs the BT-500's tracking, clicking, and scrolling speeds but not button configuration— but we're OK with that because right-clicking in Mac OS X defaults to a handy contextual menu, and we can set the scroll wheel's click to trigger Exposé window-hiding and -revealing (via the Exposé preference pane). All this mouse lacks is acceleration control—although Mac OS X's tracking-speed adjustment works fine wholesale, we're spoiled by Kensington's MouseWorks software, which provides refined speed controls,

This is the perfect mouse for people with new PowerBooks and places to go.

including sliders for setting the cursor's speed relative to how fast you move the mouse.

If your 'Book doesn't have onboard Bluetooth, you might not enjoy coughing up more dough for a Bluetooth adapter (Apple sells one for $39.95). However, other than its lack of a custom software driver, there's nothing we don't like about the BT-500—we almost wish there were a larger version so that we could make it our everyday desktop mouse.
—*Niko Coucouvanis*

COMPANY: RadTech
CONTACT: 314-960-9188, www.radtech.us
PRICE: $54.95

REQUIREMENTS: Bluetooth-equipped Mac, Mac OS 10.3.2

GOOD NEWS: Tiny. Light but solid. Grippable. Great tracking.
BAD NEWS: Optional Bluetooth adapter not included. No custom software driver.

MacAddict RATED
⬤⬤⬤⬤◯
GREAT

PHOTOGRAPHY BY SAMANTHA BERG

PodFreq

RELATIVELY USER-FRIENDLY FM TRANSMITTER FOR IPOD

iPod-to-FM transmitters are getting smarter all the time, and Sonnet's PodFreq is the smartest we've seen yet. It encases the iPod rather than dangling, perching, or otherwise protruding from it, and provides a full-spectrum digital tuner and pass-through ports for charging the resident 'Pod via FireWire or USB. Just don't be fooled by the 'Freq's case-like appearance—this device leaves the iPod's entire front exposed and vulnerable.

The PodFreq has just about everything we could ask for in an FM transmitter: It sucks line-level audio out of the 'Pod's dock connector rather than the weaker signal out of the headphone jack; it draws power from the iPod's

internal battery yet doesn't noticeably shorten that battery's life; and it can transmit to any frequency on the FM spectrum rather than just a few preprogrammed ones—all good stuff.

In use, the above-mentioned perks pay off. We were able to get good reception on our home stereo, clock radio, and car radio. As is the case with other transmitters, local radio stations interfere with the PodFreq, but thanks to its push-button digital tuner we easily retuned the device, even while driving.

We'd love the PodFreq if we could find a place to park it.

Now for the bad stuff: PodFreq looks like a protective case and does indeed cover the iPod's back and sides, but not the highly scratchable LCD screen or anything else on the iPod's front—we feared scratching our iPod even when using the fleecy pouch Sonnet provides. In a similar vein, we couldn't find a place in our car to put the iPod-PodFreq rig, and ended up holding it in our lap. However, if you can accommodate the PodFreq's foibles, it does its job admirably.—*Niko Coucouvanis*

COMPANY: Sonnet Technologies
CONTACT: 949-587-3500, www.sonnettech.com
PRICE: $99.95

REQUIREMENTS: Any dockable iPod model except mini

GOOD NEWS: Easy to use. Works well. Inspires no end of freq-freak wordplay.
BAD NEWS: No included way to mount it in your car. Looks like a protective case, but lacks face protection.

MacAddict RATED
⬤⬤⬤⬤◯
GREAT

G5Jam

INSANELY FAST INTERNAL RAID FOR POWER MAC G5

WiebeTech's ingenious G5Jam not only quadruples your Power Mac G5's complement of internal hard drives, but also can quadruple its file-transfer performance.

The G5Jam's method of cramming four drives into a Mac designed for just two is a clever kludge. After installing two of the four supplied 250GB Hitachi Deskstar drives into your Power Mac G5's existing SATA slots (WiebeTech also sells the G5Jam in other drive configurations), you simply bolt the other two onto the G5Jam's mirrored metal air baffle and heat sink, which replaces the G5's clear-plastic baffle—the drives fit into the front of the Mac's PCI compartment. Next, slip the supplied dual-port SATA

card into any available PCI slot, then cable everything up, and you're good to go.

We striped the four drives into a RAID 0 array using Panther's Disk Utility and booted from an external FireWire 800 drive, but you can also boot from the G5Jam itself if you're running Panther. We then ran the popular Xbench benchmarking software, and our jaws dropped when it reported that the G5Jam had a top file-reading speed of just under 230MB per second—well over four and a half times as fast as the drive in a stock Power Mac G5. Real-world tests showed similar, if not as spectacular, performance: Duplicating large files, for example, was just

Slip this beast into your Power Mac G5 and hold on to your hat.

under four times as fast. If your work requires getting files to and from RAM expeditiously, the G5Jam can be a monumental time-saver.

While there are certainly less expensive ways to increase your Power Mac G5's storage capacity, merely adding more gigabytes isn't what the G5Jam is all about—it's all about speed.—*Rik Myslewski*

PHOTOGRAPH BY SAMANTHA BERG

COMPANY: WiebeTech
CONTACT: 866-744-8722, www.wiebetech.com
PRICE: $2,199.95 as tested (four 250GB drives)
REQUIREMENTS: Power Mac G5
GOOD NEWS: Astonishing speed. Easy to install. Multiple configurations available.
BAD NEWS: Pricey. Bootable only if running Mac OS 10.3 (Panther).
MacAddict RATED AWESOME

Mercury Pro DVD-/+RW

WELL-ACCESSORIZED EXTERNAL DVD DRIVE

The case doesn't make the drive, but in this case, the bundle does.

We've seen enough external DVD burners so that it takes a little something extra to impress us—and Other World Computing's Mercury Pro DVD-/+RW provides that something. Among the extras are a software bundle that includes the capable DragonBurn for CD and DVD burning, and stacks of blank media—25 CD-Rs and 5 DVD-Rs—so you can hit the ground burning.

But wait, there's more! The case sports dual FireWire 400 ports for daisy-chaining, plus a USB 2.0 port for those whose Macs are so enabled (it's backward compatible, but woe is he who has to burn DVDs over USB 1.1). Whichever connection you choose, the cable is in the box. And did we mention how much we appreciate the stacks of blank discs that come with this drive?

It's not lame, outdated media either: The CD-Rs are rated at a fast 52X, and the DVDs at 4X. Sure, the drive can burn at 8X—which Apple reached only in its latest Power Mac G5s, announced on June 9, 2004—but we'd feel greedy to complain. CD-burning speed is less cutting-edge, but 24X is decent for a CD/DVD burner.

The included DragonBurn works fine for copying and authoring basic CDs and DVDs, but options for interactive DVDs are limited—and yes, Apple's iDVD still refuses to acknowledge external burners. iTunes recognized the Mercury Pro and happily burned MP3 and audio discs once we selected it as the burner in iTunes' preferences. Burning from the Finder was even easier, with no preferences to check. It's also worth mentioning that this drive supports the DVD+R/RW formats in addition to good old DVD-R/RW—but we've gotten along fine with only the latter.

Although the Mercury Pro's case may be a yawner aesthetically, this drive is a great performer.
—*Niko Coucouvanis*

COMPANY: Other World Computing **CONTACT:** 800-275-4576, www.macsales.com **PRICE:** $189.99

REQUIREMENTS: FireWire-equipped Mac, Mac OS 8.6 or later (bundled software requires 9.1; USB 2.0 requires OS X)

GOOD NEWS: Solid drive. Packed with perks. Nice price. **BAD NEWS:** Nothing serious—but that case design is getting mighty old.

MacAddict RATED
◯◯◯◯◯
GREAT

Slim K4Xtreme DVD±RW

PORTABLE DVD DRIVE

This portable 4X DVD burner looks swell, but isn't very Mac friendly.

The metal-cased K4Xtreme certainly looks suave next to a PowerBook—or next to a G5 tower, for that matter—but looks can be deceiving. On its own, the K4Xtreme can't do much with a Mac: The Finder, iDVD, and iTunes don't acknowledge it as a burner, and while most of our DVD discs worked normally, the drive petulantly ignored some discs with no rhyme or reason.

We had high hopes for this drive, with its promise of bus-powered, 4X DVD burning and its USB 2.0 and two FireWire ports. The box generously includes FireWire and USB cables, two blank DVD discs, and Roxio's Toast 6 Lite for CD and DVD burning. What this drive doesn't include is decent Mac support for burning—so we used Toast

Lite, no problem. But even when it came to *reading* discs, the Mac didn't always recognize the K4Xtreme as a drive: We'd insert a disc and hear it spin up inside the drive, then spin back down. The drive then nodded off—to get it to

spit out the disc, we had to unplug the drive and plug it in again via the USB, FireWire, or power cable, then press the eject button while the drive was active. Audio discs never worked, and data CDs only worked about half the time. Both data and movie DVDs usually worked.

If you're content with using your Mac's internal drive to play CDs, the K4Xtreme holds its own as a burner, thanks to Toast Lite—just make sure you enable Toast's Buffer Underrun Prevention via the Recorder menu's Recorder Settings. Before we did so, the drive's wee 2MB buffer choked on a DVD burn—but since it occurred during data ripping, no discs were harmed. The K4Xtreme isn't a total washout, but it's not Mac savvy enough to recommend.—*Niko Coucouvanis*

COMPANY: Kano Technologies **CONTACT:** 866-500-5266 or 714-379-5520, www.kanotechnologies.com

PRICE: $275 **REQUIREMENTS:** G3 with FireWire or USB 2.0, Mac OS 9.1 or 10.1.2, 100MB disk space, QuickTime 4 or later

GOOD NEWS: Compact and bus-powered for easy travel. Fast burning. **BAD NEWS:** Doesn't play nice with the Finder, iDVD, or iTunes.

MacAddict RATED
◯◯◯◯◯
SO-SO
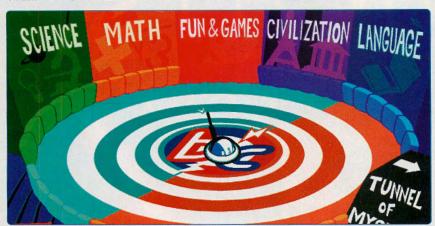
BumperCar

WEB BROWSER WITH TRAINING WHEELS

This is what the Web looks like without all the smut.

Let's face it: The Internet is full of creeps, swindlers, and no end of unsavory diversions that your kids might find more interesting than the wholesome infotainment you envision them devouring with relish. Kid-safe browsers like BumperCar are designed to filter out the smut so you don't have to pull the Internet plug. BumperCar has a high degree of customizability: You can set it for High, Medium, or Low restrictiveness, or define your own custom settings to block only specific bad stuff, to block everything *except* specific good stuff, or just about anything in between.

BumperCar has far better nastiness filters than standard browsers. Safari, for example, allows you to block by technology only (Java, pop-up windows, and so on), not by content.

BumperCar balked when we tried to Google up some Hot Sex.

BumperCar's default home page offers five main topics: Civilization, Fun & Games, Language, Math, and Science (bonus points for not lumping stupid ol' math in with fun science!), each revealing a list of kid-safe links—and you have full control over what appears in those lists via BumperCar's Safety Settings. Other security options include a customizable profanity filter (prestocked with profanity, some of which even we jaded editors had never heard), blacklists and whitelists, ratings, the ability to disable downloads and ad banners, and a daily surf-time allowance.

Bottom line: If you want to let your kids explore the Internet at times when you can't provide direct supervision, BumperCar is a must-have—it's easy to set up and quite a vigilant watchdog. The only problem is that if your kids discover your password, they get free reign. —*Niko Coucouvanis*

ON THE DISC
BumperCar 1.0 demo

COMPANY: Freeverse
CONTACT: 212-929-3549,
www.freeverse.com
PRICE: $49.95

REQUIREMENTS: G3 or faster,
Mac OS 10.2.8 or later, Internet connection

GOOD NEWS: Makes the Web kid-safe. Includes fun games.
BAD NEWS: If your kids figure out your password, they're free to roam.
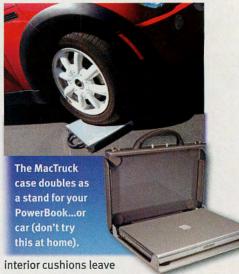
MacAddict RATED
●●●●○
GREAT

MacTruck

TOUGHEST POWERBOOK CASE EVER

Every so often a product comes along that simply makes us say, "Whoa!" Such is the epically named RadTech MacTruck by CompuShell. Forged out of aluminum and available in sizes that snugly hold any of Apple's current PowerBooks, this case is officially bulletproof.

But closer inspection reveals some downright cushy finishing: smooth powder-coat two-tone gray finish inside and out; custom-fit, no-slip interior cushions to keep your 'Book put; and two sturdy eyelets to which you can attach a shoulder strap (not included). You can even lay the case out flat and use it as an impromptu tilted stand—the

The MacTruck case doubles as a stand for your PowerBook...or car (don't try this at home).

interior cushions leave plenty of room for airflow so your 'Book can keep its cool.

This case is so tough that we tend to forget about the sensitive electronics *inside* the PowerBook—so keep in mind that even when your 'Book's protected by this righteous case, a sharp or sudden impact could kill the hard drive.—*Niko Coucouvanis*

COMPANY: RadTech
CONTACT: 314-960-9188,
www.radtech.us
PRICE: $199 (12- and 15-inch),
$229 (17-inch)
REQUIREMENTS: PowerBook
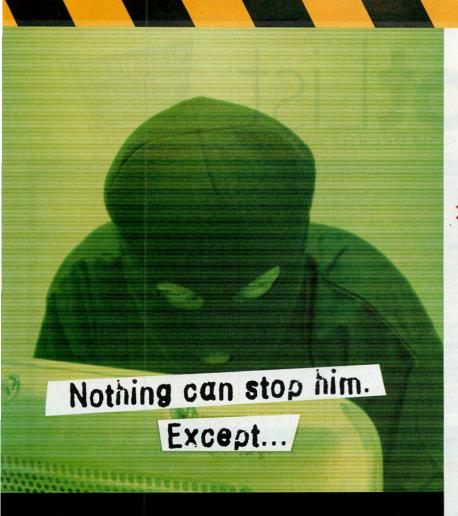
GOOD NEWS: Total industrial cool. Tougher than nails.
BAD NEWS: Zero room for accessories.

MacAddict RATED
●●●●●
AWESOME

the **Hot**List

THE BEST OF THE BEST FROM RECENT REVIEWS

NEW THIS MONTH

FileMaker Pro 7

Reviewer Jack Miller calls this newest version of the Mac's flagship database "sophisticated."

El Gato EyeTV 200

Former *MacAddict* Executive Editor Cathy Lu says, "We've always loved the EyeTV."

Logitech Z-680

According to Reviews Editor Niko Coucouvanis, "The Z-680 will thrill you."

Nikon D70 Digital SLR

Photo pro Kris Fong calls the D70 "the most satisfying digital camera we've shot with to date."

SOFTWARE

AUDIO			
Ableton Live 3.0.2	$399.00	May/04, p58	New effects and clip-level automation in a real-time sequencer.
IK Multimedia AmpliTube Live	$129.00	Nov/03, p46	Don't think software can replace monster *guitar amps*? It can.
Native Instruments Absynth 2	$299.00	Apr/04, p42	This software synth can create audio magic like no other.
Native Instruments Reaktor 4	$559.00	Jun/04, p56	If you can imagine a sound, you can create it with this synth.
GAMES			
Aspyr The Sims Making Magic	$29.99	Jun/04, p51	The Sims series delves into black—and white—magic.
Freeverse Software ToySight	$34.95	Apr/04, p50	Use your Webcam to play this game—it's as cool as it sounds.
MacSoft Halo: Combat Evolved	$49.99	Mar/04, p38	It's as awesome as your Xbox buddies said it was.
MacSoft Neverwinter Nights	$49.99	Jan/04, p54	Flaunt your D&D skills in the best RPG ever.
Macsoft Unreal Tournament 2004	$39.95	Jun/04, p48	The best first-person shooter adds new vehicles and weapons.
GRAPHICS & LAYOUT			
Adobe Acrobat Professional 6	$449.00	Nov/03, p50	If you're in pro publishing, this is a must-have app.
Adobe InDesign CS	$699.00	Feb/04, p46	More features and easier navigation make layout a snap.
Adobe Photoshop CS	$649.00	Feb/04, p44	Just when you thought Photoshop couldn't get better, it did.
Macromedia Dreamweaver MX 2004	$399.00	Jan/04, p48	Our favorite Web-design tool adds improved CSS support.
Macromedia Flash MX 2004 Professional	$699.00	Jan/04, p48	Don't know how to write code? Flash MX will do it for you.
Macromedia FreeHand MX	$399.00	Jun/03, p49	In the race with Adobe Illustrator, FreeHand pulls ahead.
PRODUCTIVITY & UTILITIES			
Bare Bones Software BBEdit 7.0.1	$179.00	Mar/03, p52	By far the most powerful text editor money can buy.
FileMaker Pro 7	$299.00	Jul/04, p46	A complete rewrite vaults this database into the big leagues.
Microsoft Office 2004	$399.00	Aug/04, p42	Enhancements to every app add up to a worthy upgrade.
You Software You Control	$49.95	Apr/04, p45	This menu utility increases your control over your Mac.
VIDEO AND ANIMATION			
Adobe After Effects 6.0	$649.00	Dec/03, p49	This motion-graphics stud improves its 3D powers.
Apple DVD Studio Pro 2	$499.00	Dec/03, p58	Apple's essential DVD-burning app is still the one to beat.
Apple Final Cut Express 2.0.2	$299.00	May/04, p48	Unless you need to go Pro, Express will save you $700.
Apple Final Cut Pro HD	$999.00	Sep/03, p44	This kick-ass video editor now includes four new apps.

HARDWARE

ACCESSORIES			
Microsoft Wireless IntelliMouse Explorer	$64.95	Jan/04, p57	Our favorite mouse adds horizontal scrolling.
AUDIO & VIDEO			
ADS Technologies Pyro DV Drive	$699.00	Jan/04, p55	Record DV video directly to this mobile encoder and drive.
Apple 20GB iPod	$399.00	Jul/03, p44	The world's greatest MP3 player gets smaller and cooler.
Apple iPod mini	$249.00	May/04, p45	If size and style are important to you, pick up this MP3 player.
El Gato EyeTV 200	$349.00	Jul/04, p53	This DV recorder will change the way you watch TV.
Logitech Z-680	$399.95	Jul/04, p49	There's only one word to describe these speakers: awesome.
DIGITAL CAMERAS			
Canon EOS Digital Rebel	$999.00	Mar/04, p48	Finally, an affordable pro-quality digital SLR camera.
Nikon Coolpix 5400	$699.95	Dec/03, p22	This prosumer camera handles well and shoots even better.
Nikon D70 Digital SLR	$1,299.00	Jul/04, p50	It's as close to perfect as any digital SLR camera we've seen.
Olympus D-560 Zoom	$229.00	Dec/03, p22	This affordable point-and-shoot cam provides great images.
DISPLAYS			
Apple Cinema HD Display	$1,999.00	Aug/02, p40	This 23-inch, 1,920-by-1,200-pixel beauty inspires lust.
Formac gallery 2010	$1,299.00	Jan/03, p47	Bright, fast, huge—and it costs only $0.0007 per pixel.
PRINTERS			
Epson Stylus Photo 2200	$699.00	Oct/02, p42	The most stunning photo printer we've ever tested.
HP Laserjet 1012	$199.99	Mar/04, p51	Can a pint-size, sub-$200 laser printer be this good? Yep.
STORAGE			
LaCie d2 200GB FireWire 800	$259.00	Jun/03, p47	FireWire 800 speed meets solid-as-a-rock construction.
OWC Mercury Elite Pro	$239.99	Jul/03, p53	This 180GB FireWire 800 drive outpaces the competition.
WiebeTech Fire800	$549.95	Dec/03, p53	Hefty 300GB capacity combines with speedy performance.
WiebeTech MicroGB800	$429.95	May/04, p61	At 7,200 rpm, this 60GB beauty is one snappy portable drive.

MacAddict · GUITAR WORLD

ENTER THE BATTLE OF THE GARAGE BANDS!

WIN A SIGNATURE JOE SATRIANI IBANEZ GUITAR, PEAVEY JSX AMP AND TOP AUDIO EQUIPMENT

JOE SATRIANI
IS THERE LOVE IN SPACE?

NEED INSPIRATION?
Check out legendary guitarist Joe Satriani's latest album, *Is There Love in Space?*, recorded using a Dual 2GHz Power Mac G5 and a Pro Tools HD setup.

Just write a 1-minute song and enter it in either our Pro or Amateur Contest—see details below! The editors of *MacAddict* and *Guitar World* magazines will listen to your masterpiece and select five finalists from each category. Guitar legend and Mac aficionado Joe Satriani will then select one winner in each category. Winners will be announced at a listening party in January 2005.

PRO CONTEST

Send us a 1-minute-long original composition that shows off your skills. When we say *original*, we mean it—no sampled stuff for which you can't claim a copyright. Bounce your tune down to an MP3 file and send it to us using the instructions at right.

AMATEUR CONTEST

Send us a 1-minute-long original composition created in Apple's GarageBand using only unedited Apple Loops from GarageBand and GarageBand Jam Pack—but feel free to use any or all GarageBand's many effects. Send us an archived folder containing your contact info and your GarageBand project (to archive the folder in Mac OS X, Control-Click it, and then select Create Archive Of from the contextual menu).

PRO PRIZE PACKAGE

Ibanez Satriani Signature Guitar
Peavey Satriani Signature Amp
M-Audio FireWire 410 mobile recording
   interface
M-Audio Studiophile BX5 reference monitors
M-Audio Solaris condenser microphone
M-Audio Oxygen8 MIDI controller
M-Audio Studio Pack equipment backpack
LaCie 500GB Big Disk Triple Interface hard drive

JUDGING CRITERIA: 50% Production Quality, 25% Originality, 25% Song Construction

AMATEUR PRIZE PACKAGE

M-Audio MobilePre USB preamp and audio
   interface
M-Audio Studiophile LX4 2.1 reference monitors
M-Audio Luna condenser microphone
M-Audio Keystation 49e MIDI controller
LaCie 500GB Big Disk Triple Interface hard drive

JUDGING CRITERIA: 50% Uniqueness, 50% Song Construction

Only one entry per contestant. Contestants can enter either the Pro or the Amateur Contest but not both.

CONTESTANT INFORMATION

Full Name:_____
Address:_____
City:_____
State:_____
Zip:_____
Email or telephone:_____

Which contest are you entering?
(check the appropriate box):
☐ Pro   ☐ Amateur

Name of song:_____

Pro entrants only: Tell us about your song in 50 words or less— what hardware, software, and other equipment did you use to create it?

Check the appropriate box.
☐ I promise that my Pro Contest entry is entirely original. I fully own the copyright to all parts of the composition.
☐ I promise that my Amateur Contest entry is composed using only unedited Apple Loops included in Apple's GarageBand and GarageBand Jam Pack.

Signature:_____

Submit your song in one of two ways:
1. Burn it onto a CD and send it to one of the following two addresses:

MacAddict readers, send it to:
Battle of the Garage Bands, *MacAddict*, 150 North Hill Dr., Brisbane, CA 94005

Guitar World readers, send it to:
Battle of the Garage Bands, *Guitar World*, 149 5th Ave., 9th Floor, New York, NY 10010

2. Upload it to one of the following Web sites:

MacAddict readers:
Go to www.macaddict.com/GarageBandContest

Guitar World readers:
Go to www.guitarworld.com/GarageBandContest

Deadline for entry: July 31, 2004
Contest results will appear in *MacAddict* and *Guitar World*'s December 2004 issues.

For complete contest rules, please see page 78.

ask us

Your Mac contains multiple Library folders.

MULTIPLE LIBRARY FOLDERS

Why is there more than one Library folder on my Mac?
Could the New York Public Library serve 8 million people with just one building? Because it's a true multiuser operating system, Mac OS X needs to store different levels of information in different places. You have a Library folder in your user folder that controls settings and preferences only for you. The system itself maintains two Library folders—the root-level Library folder and the System > Library folder—that contain global settings that affect all users. Your

user name > Library folder can override the root-level Library folder, but it's overruled by the System > Library folder, which contains items used by Mac OS X.

TROUBLESOME TRACKPADS

How do you troubleshoot problems with your 'Book's trackpad?
First, determine whether your problem is with the trackpad's hardware or software. Disconnect all USB and FireWire devices, and boot up your 'Book with your system CD or DVD (insert the disc and restart your machine holding down the C key). If your trackpad functions correctly using the software from the system disc, then you know the problem is rooted in the software on your drive; restore it, and all should be well. If your trackpad still doesn't function, the problem is with the hardware, and it's time for a trip to the service center.

FORMAT CARD

How often should I reformat the memory card in my digital camera?
Often. Like hard drives, digital-camera memory cards, such as CompactFlash
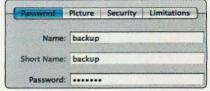
This little guy can get corrupted just like its big brother, the hard drive.

and SD, are susceptible to corruption. As a preventative measure, pros will tell you to reformat your card (while it's in the camera) after every major shoot. Real life will probably force you into a less-frequent schedule. Conveniently, reformatting is the fastest way to erase a bunch of old pictures on your card.

SHORT NAME

How can I change my short name in Mac OS X?
This process should be easy but due to Mac OS X's Unix core, it's not. Your short name, the shortened version of your

You can't easily change your short name after you create your user account.

user name, is how Mac OS X keeps track of who you are. In the Accounts system preference for a previously created account, you can change the info in your Name field but not your Short Name field. There are various methods for altering the short name, including the use of the Unix command-line or the NetInfo Manager utility, but they can render your system unbootable very easily. Your best bet is to create a new user account (with a new short name), and transfer your files and settings to it. Read the Apple support document 106824 (http://docs.info.apple.com /article.html?artnum=106824) for more.

quick answers

EXTENSIONS OFF

How do you start up Mac OS 9 with extensions turned off?
Hold down the Shift key during startup. Holding down the spacebar during startup calls up the Extensions Manager.

DEFINE USB

What does USB stand for?
USB stands for Universal Serial Bus. USB comes in two flavors; the 12 Mbps USB 1.1 and the 480 Mbps USB 2.0. USB 2.0 devices are backward compatible in case you have only USB 1.1 ports on your Mac, but of course you can only get the slower speed.

RAM CHECK

How can I check memory usage in Mac OS X?
Go to the Activity Monitor (Applications >

Utilities), and click the System Memory tab.

Monitor Mac OS X memory usage.

CLAMSHELL UPGRADE?

Can I upgrade the hard drive in my 300MHz clamshell iBook?
Yes, your iBook can handle other 2.5-inch notebook drives that are 9.5mm or less in thickness, but the upgrade
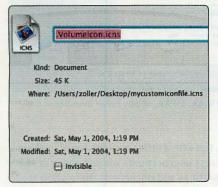
CD ICON

How can I use Toast in Mac OS X to burn CDs with custom icons?

The key to this process is a file called .VolumeIcon.icns, which uses a file format specific to Mac OS X icons. First, find an existing file or folder that has the custom icon you want to use. Next, use the free utility Extract-icns (www.exittoshell.com/products /extract-icns.shtml) to extract the icon from that source file or folder. The icon will retain the source's name, appended with an .icns suffix. This is the file you will use on your CD. Open it in Preview (Applications > Preview) to confirm that it's the correct image. Next, build your CD as you normally would in Toast, and when you're ready to burn, drag your .icns file into the Toast window, making sure that it's at the root of the CD and not in a folder
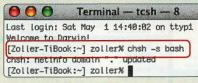
Rename your .icns file as *.VolumeIcon.icns* to create a custom CD icon.

on the CD. Finally, double-click the .icns file in the Toast window; in the dialog that appears, rename the file as *.VolumeIcon.icns*. Click OK, burn

BEIGE PANTHER?

Can I run Mac OS 10.3 Panther on my beige G3?

Officially, no. Panther support starts with the Blue-and-White Power Mac G3. You can, however, try using OWC's work-in-progress shareware utility XPostFacto (http://eshop.macsales .com/OSXCenter/XPostFacto /Framework.cfm?page=XPostFacto3 .html) to install Panther on your

UNIX UNIVERSITY

Q. Why does the Terminal still launch the tcsh shell even though I upgraded to Panther? I thought bash was the default shell now.

It is, but since you upgraded to Panther instead of doing a clean install or buying a new machine with Panther preloaded, your Terminal kept the tcsh shell as the default from your older

Play the shell game in the Terminal.

OS X installation. Let's back up for those readers who are now thoroughly confused.

When you launch the Terminal (Applications > Utilities) to access the command line, the command-line interface you see is actually a shell—

your window into Unix. Just like there are different operating system interfaces, there are different shells. Mac OS X gives you a few options such as tcsh, bash, and zsh. Although tcsh used to be the Mac OS X default shell, when Apple introduced Mac OS 10.3 (Panther), it switched the default to the bash shell. The change pleased many Unix users since bash is the same shell used on most Linux machines and bash uses a more standard syntax than tcsh does.

Switching your shell from tcsh to bash is easy. Type `chsh -s bash` in the Terminal, press Return, and close the window. Open a new window, and you will be in the bash shell for good. Type `chsh -s tcsh` to return to the tcsh shell. For more information on command-line shells, check out the Internet FAQ Archives page on shells (www.faqs.org/faqs/unix-faq/shell /shell-differences).

your CD as you normally would, and voilà—your CD has its own custom icon.

REMOVING CUSTOM SCREEN SAVERS

I added a folder of pictures to the Desktop & Screen Saver system preference in Mac OS 10.3 to create my personal screen-saver slide show. How do I remove the folder?

The easiest solution is to choose another folder to replace it. The Desktop & Screen Saver system preference can remember

requires arduous surgery that's best left to a qualified Apple technician.

unsupported Mac—just be sure to read the documentation first. This utility is free, but access to the support forum costs $10.

TWO iPODS, ONE MAC

Can I use two iPods on one Mac?

You sure can. However, to maintain them with separate music libraries, you need to manually update the iPods by clicking the iPod button in iTunes when each is connected. If you set iTunes to automatically update your iPods, they will have exactly the same content.

Delete these files to reset your Screen Saver preferences.

only one folder at a time. Press the Screen Saver tab, and select Choose Folder in the scrolling list to do just that. To remove any hint of custom folders and return this system preference back to its original state, quit System Preferences and go to your *user name* > Library > Preferences > ByHost folder and delete the two files that begin with *com.apple.screensaver*. They will regenerate the next time you launch the Desktop & Screen Saver system preference and choose another screen saver.

Seven years of handling tech support for Apple, Power Computing, and a Texas school district have given Buz Zoller Mac superpowers.

Submit technical questions or helpful tips directly via email (askus@macaddict.com) or c/o *MacAddict*, 150 North Hill Dr., Brisbane, CA 94005.

Share Files and Apps with Multiple Users (TRICKY)

by Johnathon Williams and Kris Fong

WHAT YOU NEED

Mac OS 10.2 or later

Administrator status

iTunes 3 or later

iPhoto 3 or later

iMovie 3 or later

Carbon Copy Cloner, optional (donationware, www.bombich.com /software)

Don't worry. This type of sharing won't get you sued by the RIAA, MPAA, or any other member of the alphabet mafia—well, not yet anyway.

Scores of single-Mac families rejoiced when Apple introduced multiple user accounts with Mac OS X. Now we can let friends and family use our Mac without worrying about their eyeballing our email messages, rifling through our bookmarks, or deleting stuff from our desktop. *Let them be separate,* the voice from Cupertino said, and it was good.

ON THE DISC
Carbon Copy Cloner 2.3

Well, it's good until you realize that sharing can be a hassle. Your music, pictures, movies, addresses, and even applications are off-limits to other users unless you set up your stuff properly. But with a little tweaking, you can share just about anything across user accounts without giving up the security of your other settings and documents. Here's how to make your favorite apps and files public for other users to enjoy. Since you'll be working with your actual music, photo, and data files, make sure to back up your stuff before you begin.

Share iTunes Music

1 Take Your Collection Public

To share your music, put your library in a public place. Quit iTunes (if it's running) and navigate to Users > Shared. Open a new Finder window and navigate to your user's Music > iTunes folder. Grab the iTunes folder and drag it into the Shared folder. For iTunes to work, it needs to see an iTunes folder in your user Music folder; therefore you have to create an alias in the old location that points to the shared folder. Because old-fashioned Finder aliases won't always work here, use command-line power to make the link. Open the Terminal (Applications > Utilities). At the prompt, type **ln -s /Users/Shared/iTunes ~/Music**, and press Return. This creates an alias in your Music folder that links to the iTunes folder in the Shared directory.

To share your music, drag your entire iTunes folder into the Shared folder.

/iTunes/"Erich's iTunes Music" ~/Mus

2 Consolidate Other Music Libraries

If other users want to share their music, move their tunes into the Shared iTunes folder. Log in as another user and navigate to Users > Shared > iTunes. Open another Finder window, navigate to this account's *user name* > Music > iTunes, rename the iTunes Music folder to avoid a naming conflict (for instance, call it Max's iTunes Music), and drag the folder into the iTunes folder in the Shared directory. Then launch the Terminal, type **ln -s /Users/Shared/iTunes/"***new name of iTunes Music folder***" ~/Music/iTunes**, and press Return. This creates an alias of the renamed iTunes Music folder in the other user's Music > iTunes folder. Repeat this step for anyone else who wants to share music. If you want users to have read and write access to

Surround your renamed iTunes Music folder with double quotes if the name contains spaces, or you'll get an error.

your music, tweak the file permissions. Log in to your own user account, open the Terminal, type **sudo chmod -R 777** (space) **/Users/Shared/iTunes**, and press Return. Type your admin password at the prompt and press Return again.

3 Snag Shared Files

Now let's access some tunes. Launch iTunes. If you don't want to fill the hard drive with duplicate song files, select Preferences from the iTunes menu, click the Advanced tab in the resulting dialog, uncheck the Copy Files To iTunes Music Folder When Adding To Library box, and click OK. Then select Add To Library from the File menu. In the resulting dialog, navigate to Users > Shared > iTunes, select any user's iTunes Music folder, and click Choose. iTunes copies the song titles to your Library and—if you didn't uncheck the aforementioned box—also copies all of the music files to your iTunes Music folder. You're now free to rock out to any user's
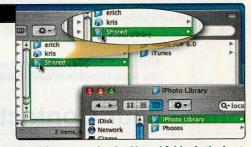
Once you select Add To Library in iTunes, you can copy any user's Music folder to your own Library.

tunes. Panther users, keep in mind that only one instance of iTunes can run at a time. If your household is a fan of fast user switching—and whose isn't?—make sure that everybody knows they should close iTunes when they're done listening.

Share iPhoto Pics

1 Move the Library

Rather than summon everyone to gather round the ol' Mac and check out your family vacation photos, you can set up a shared iPhoto library in which all users can view, add, and edit images. If you'd rather keep separate libraries, just create a Photos folder in Users > Shared, toss in your prized pics for all-user viewing access, and skip the rest of this section. Otherwise, quit iPhoto if it's currently running. Then go to Users > Shared. Open a new Finder window, go to your user's Pictures folder, and drag the iPhoto Library folder into the Shared folder. To relink the iPhoto app to the newly moved Library, open the Terminal. At the prompt, type **ln -s /Users/Shared/"iPhoto Library" ~/Pictures**, and press Return. This creates an alias in your user's Pictures folder that links to the shared iPhoto Library.

As with your music, the Shared folder is the best place to stash your photos for all-user access.

2 Export to Consolidate
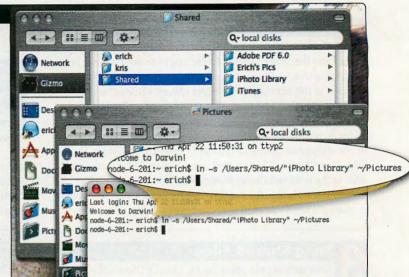
If other users have photos they want to share, consolidate all of their libraries into one shared collection. Instead of having iPhoto import thumbnails as well as regular images when you import an existing library, export the library of images only. Log in as another user and launch iPhoto. From the File menu, select Export. In the resulting dialog, select Original from the Format drop-down menu, select Full-Size Images, and click Export. In the subsequent dialog, navigate to the Desktop, click New Folder, give the folder a name (such as *Bubba's Pics*), click Create, and then click OK. iPhoto copies all original images into this folder. Then drag the folder into the Shared folder and quit iPhoto.

Because iPhoto doesn't import existing libraries efficiently, use the Export option when consolidating. ▶

3 Share and Link

To link this user to your shared iPhoto Library, go to his or her Pictures folder and give the existing iPhoto Library a new name (such as *Bubba's iPhoto Library*) to preserve its contents. If you want to save disk space, you can opt to delete this folder (since you currently have copies of all the original images in the Shared folder), but don't do so without asking first—he or she may want to preserve edited iterations of the originals that reside in this folder. Open the Terminal, type **ln -s /Users/Shared/** (no space) **"iPhoto Library" ~/Pictures**, and press Return. This creates an iPhoto Library alias in the Pictures folder, linking iPhoto to the shared library. Repeat steps 2 and 3 for every account you want to link to the shared library.

After exporting this user's photos to the Photos folder in Shared and renaming his original iPhoto Library, we used the Terminal to create a new iPhoto Library alias that links to the shared iPhoto Library.

4 Consolidate 'Em All

To move everyone's pics into the shared library, log in to your own account again. Because you may need permission to consolidate another user's pics, open the Terminal, type **sudo chmod -R 777 /Users** (no space) **/Shared/"***name of user's pics folder***"**, and press Return to gain access. Type your password at the prompt and press Return again. Then launch iPhoto; from the File menu, select Import. In the resulting dialog, navigate to and select that user's folder of pics in the Shared folder, and then click Import to copy the images into the shared library. Repeat this step for all other users' pics folders.To give users the ability to crop or adjust any photo in the shared library, type **sudo chmod -R 777 /Users/Shared/"iPhoto Library"** in the Terminal, and press Return. From now on, all users will be able to download and view images from one consolidated iPhoto Library. (Panther users, run only one copy of iPhoto at a time to avoid corruption.)
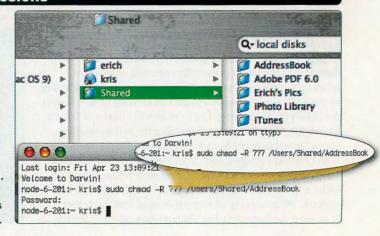
After giving yourself access to a user's pics via the Terminal, use the Import function to consolidate them with the shared library.

Share Your Contacts

1 Share Address Book Data and Permissions

You all live in the same household. You probably even hang with the same people. Why not share one common Address Book? To do so, navigate to your *user name* > Library > Application Support > AddressBook. In a new Finder window, open Users > Shared and drag the AddressBook folder into the Shared folder. To set read and write permissions for all users, open the Terminal, type **sudo chmod -R 777 /Users** (no space) **/Shared/AddressBook**, and press Return. Type your password at the prompt and press Return again. Then link your Address Book app to its new, shared data location; open the Terminal, type **ln -s /Users/Shared/AddressBook** (space) **~/Library/Application\ Support**, and press Return.

Typing this command line gives all users permission to read your little black book.
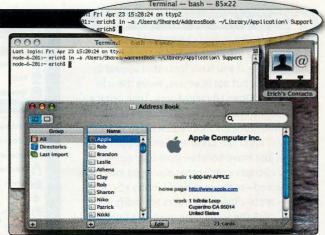
2 Consolidate Contacts

To allow others to access the shared book and consolidate their contacts, log in as another user. Launch Address Book; under Group, select All; select File > Export Group vCard; and save the vCard file to the desktop. Quit Address Book. Then go to *user name* > Library > Application Support. Rename the existing AddressBook folder (for instance, call it Old AddressBook) to make room for the pending alias. Then link this user's app to the shared data: Open the Terminal, type **ln -s /Users/Shared/AddressBook ~/Library/** (no space) **Application\ Support**, and press Return. To import the user's contacts into the shared book, launch Address Book and double-click the vCard file. Quit Address Book and repeat this step for any other user.
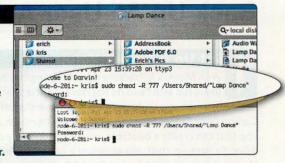
This command links this user's Address Book app to our newly shared Address Book data.

Share iMovie Projects
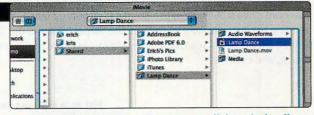
1 Share the Project

If movie editing is a collaborative effort for you, you don't need to edit under one user account—just share an iMovie project. Log into whoever's account holds the project, and drag any iMovie project folder into Users > Shared. Then open the Terminal, type **sudo chmod -R 777 /Users/Shared/"name** *of project folder*", and press Return to tweak permissions for all-user read 'n' write access. At the password prompt, type your password and press Return again. Repeat for any other projects you want to add.

Typing this command allows any user to edit this iMovie project in the Shared folder.

2 Access a Shared Project

Anytime a user wants to edit a shared movie project, just have that person log in to his or her account and launch iMovie (as with iTunes and iPhoto, users should make sure no other user is actively running iMovie before launching Panther). From the File menu, select Open Project. In the resulting dialog, navigate to and select the project in the Shared folder, and click Open. Your edited version will be stored here for all others to access and edit too.
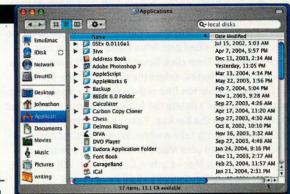
By sharing iMovie projects, all users can collaboratively edit a movie to completion—just access the file from the Shared folder.

Share Apps, Fonts, and Scripts

1 Share Apps

If you want to share third-party applications, you need only install them in the main Applications folder—not on your desktop or in your own user Applications folder. Any user can launch apps from the main folder, although you might not be able to share a specific user's preferences or data files for a particular application across accounts—our tests of this failed with Photoshop 7 and Microsoft Word. Doing so wouldn't be very practical anyway, since many preference files contain the path back to a specific account's home directory to make saving more convenient.

Your Mac's root-level Applications folder is as public as it gets— install apps here if you want to make them available to all.

2 Share Fonts and Scripts

Fonts and scripts can be had by all as long as they're installed in the root-level Library folder. If you have fonts that appear in your account but not in others, move them to this Library. Open Library > Fonts. Then open a new Finder window, go to *user name* > Library > Fonts, and move the fonts you want to share into Library > Fonts. The same applies to AppleScript scripts; just move scripts—from *user name* > Library > Scripts or any other place you may have them stored—to the root-level Library > Scripts. If you want to allow other users to modify your scripts, click the script file icon, press Command-I to open the Info window, click the Ownership & Permissions disclosure triangle (Panther users, click the Details triangle too), and change all drop-down menus to display Read & Write.
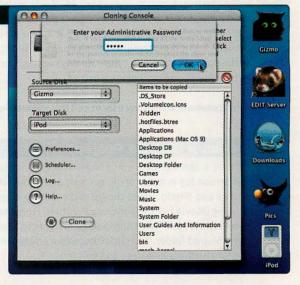
Knowing the difference between the root-level (left) and user (right) Library folders is crucial if you want to share fonts and scripts.

Back Up All User Accounts

1 Set Up a Target Volume
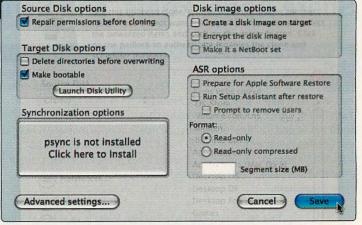
With Mac OS X, backing up everything can be tricky—you'll most likely run into "you do not have sufficient access privileges" problems when you try to back up other users' stuff. Thankfully, there's Carbon Copy Cloner (donationware, www.bombich.com)—a great little app that can create a bootable, warts-and-all copy of your entire hard drive. To back up stuff, either mount a capacious hard drive, create a big-enough empty disk image (for CD-R, DVD-R, and removable media backups), or partition your drive. Launch Carbon Copy Cloner, select your Mac hard drive's name from the Source Disk pop-up menu, and select the pending backup volume's name from the Target Disk pop-up. To enable Cloner, click the lock icon, type your admin password in the resulting dialog, and click OK.

Just as in modern science, you need to have proper authorization before you start cloning.

2 Fill It to the Rim

Once you unlock the app, you have free reign to set up preferences, scheduling, and more. At the very least, click Preferences, and in the resulting dialog, check the Repair Permissions Before Cloning box to tackle potential permissions problems head-on before the backup begins. Then click Save. If you don't want to back up certain directories, select these items in the list and click the delete button (the red circle with a slash)—don't worry, this doesn't delete the folder from your drive, it just excludes it from the backup. Then click Clone to start the backup, which may take a while. When the time comes—whether it's when your Mac's drive takes a dive or you upgrade to a new Mac—Carbon Copy Cloner will take care of restoring your hard drive and all its contents. So feel free to share your stuff in peace.

To create a bootable volume on our iPod, we checked the Make Bootable box.

Transcend Troubles

Now that you're doing your momma proud by sharing with others, be aware that you or your other users may run into a few permissions snags down the road. Anytime a user imports new songs into iTunes, photos into iPhoto, or movie clips into an iMovie project folder, the file permissions on the new arrivals may be restricted to

read-only access for other users. iPhoto will be the main culprit here—especially if different users frequently import new pictures. If you can't crop, brighten, or delete a photo, permissions are the problem. To fix this, run the appropriate chmod command for that particular directory in the Terminal again.

Take It to the Limit
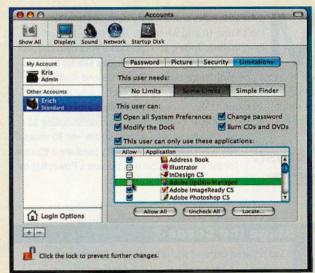
Everybody knows at least one person who can't be trusted around any appliance more complicated than a toaster. If you can't banish this person from your computer, at least set limitations—literally—to protect your investment. Open System Preferences and click Accounts; select

any accounts except your own, and click the Limitations tab. The resulting pane offers three levels of account restrictions: No Limits, Some Limits, and Simple Finder. No Limits is self-explanatory, so here are your other two options.

Set Some Limits

Some Limits allows you to turn off a user's access to System Preferences, disc burning, Dock modifications, and/or password changes. You can also control what applications he or she can use—such as iChat or LimeWire, if you're a parent who wants to keep the kids in check. Check the box labeled This User Can Only Use These Applications. Click the Applications disclosure triangle and deselect whatever apps you want to take away.

If you don't want users to have access to your full smorgasbord of apps, turn off access via Limitations.

Keep It Simple

Simple Finder restricts a user to just his or her Applications and Documents folders and the Shared folder, which appear as Docked items. For complete bunglers, set Limitations to Simple Finder, then select iTunes, iPhoto, and iMovie (and any additional apps to which you want to provide access) to appear in his or her Applications folder. He or she won't be able to access System Preferences or even browse the hard drive. ■

With Simple Finder, technology dummies have access to only three folders in the Dock—no hard drive, no menus, and no stuff to mess up.

Johnathon Williams will share anything except his collection of *MacAddict* back issues.

Create Stop-Motion Animation with a Digital Camera (TRICKY)

by Kris Fong

WHAT YOU NEED

Any digital camera

Tripod (or tabletop)

A posable subject, such as a toy action figure, hardware tool, or good friend who's extremely patient

Apple iPhoto 3 or later

Apple iMovie 3.0.3 or later

Maybe your ratty stuffed kitty escaped from GI Joe's kung-fu grip when you were four—in your imagination. Today, you can make your own childish fantasies a reality. With techniques similar to those used to create *The Nightmare Before Christmas* and *Rudolph the Red-Nosed Reindeer,* you can make objects come to life with stop-motion animation. All you need is a digital camera and plenty of time to complete your epic masterpiece. Plan on shooting 15 photos per second of animation—or 30 shots if you want exceptional quality (and are a glutton for punishment). So nosh down a PowerBar or two, and let's get started.

ON THE DISC
Lamp Dance.mov

You don't need a DV camera or special effects to make inanimate objects like this lamp come to life. All you need is a digital camera—and a little imagination.

1 Stage the Scene
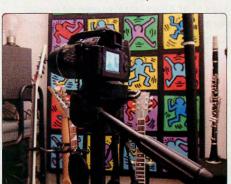
Find an area without moving objects. If you're shooting outdoors, choose a place away from moving cars and people. Also, pay attention to the sun's position, as its movement will affect the look of your images from the first frame to the last if you take a long time to shoot. If you're shooting indoors, find a place that has adequate light. Then place your subject in the scene's target area and pose it for your opening frame. If you want to have an object appear to move into the frame, start with it outside your target area.

We closed our blinds so that outside elements wouldn't affect our shooting session.

2 Ready the Camera

It's important to keep image exposure consistent throughout your shooting session. To do so, first mount your camera on a tripod in landscape orientation (horizontal) and turn it on. Set it to capture JPEGs at 640 by 480 (TV resolution) or a bit better. If you have a camera with manual controls, set them to suit your scene (don't use the automatic exposure mode), frame the composition, and take a few test shots until you find a setting you like; once you do, lock the exposure and focus. If your camera doesn't have manual controls, just set the white-balance and ISO settings for your scene, and frame your composition.

Once you've got your scene framed, don't move the camera.

3 Set, Snap, Check, Chuck

Now for the big time-suck. Take your first shot and review it on the LCD. If it looks bad (poor exposure, not in focus, or whatever), delete it and shoot again until you get a good one. Once you do, change your subject's pose slightly (or overtly for faster movement), shoot again, and review. This photo should have the same exposure as the first. If it doesn't, *chuck it and try again*. Continue in this manner for the rest of your shooting sequence. As you change your subject's pose, think in terms of how the subject should appear at each second and divide the movement into 15 increments (or 30, depending on how smooth you want the animation to look).

To create fluid animation, keep your pose adjustments small—unless you're going for a jerky look.

5 Change the Framerate

Currently, each image clip takes up three frames of the 30-fps project. If the playback speed looks OK, leave the clip duration as is. If the animation looks herky-jerky, your pose increments weren't close enough together—you can't fix it, so leave it (and remember to use smaller increments on your next attempt). If the motion seems slow or you want a 30-fps video, click the film frame button to display the clip viewer, and then click the first clip. Press your keyboard's right arrow once to select a one-frame duration. From the Edit menu, select Split Video Clip At Playhead (or press Command-T), click the second part of the split clip (to the right of the original), and press Delete. Repeat with the rest of your clips (another time-suck).

If you went all out and shot a stellar series of photos, keep one frame of each three-frame clip and dump the excess to get a 30-fps video rate (15 fps works for most).

4 Timeline Pics and Play

Once you've snapped everything, download your pics into iPhoto, fire up iMovie, and start a new project. In the interface, click Photos, and in the resulting panel, uncheck the Ken Burns Effect box and slide the hare-and-tortoise slider (clip duration) all the way to the left—the duration field should read *0:03*. Then select Last Roll (in iMovie 4) or Last Import (in iMovie 3) from the pop-up menu above the photo browser to display your images. Press Command-A to select all and then drag your pics into the timeline—iMovie displays them in order from the first shot to the last. Click the play button to see a rough cut of your animation in action.

As long as you don't rename your images, your photos will display sequentially after you drag them to iMovie's timeline.

6 Clean Up Clips

If you see slight variances in your images, clean 'em up. Click Effects; to lighten or darken a photo, click the clip, select Brightness & Contrast, adjust the Brightness slider, and click Apply. To add music, click the clock button to display the timeline viewer, click Audio, and drag any iTunes song into the timeline. Move the playhead to the end of the sequence, press Command-T to split the audio clip, select the extraneous part, and press Delete. Then fade out the volume by checking the Edit Volume box and clicking two points on the volume band—one at the end and another about 2 seconds from the end. Drag the end point all the way down, and save.

We used a GarageBand-created song for our movie's sound track.

7 Make Your Movie

Time to export. If you're using iMovie 4, select Share from the File menu. In the resulting dialog, click QuickTime, select Expert Settings from the Compress Movie For pop-up menu, and click Share. In iMovie 3, select Export from the File menu. In the resulting dialog, select To QuickTime from the Export pop-up menu, select Expert Settings from the Formats menu, and click Export. In either iMovie version, select Movie To QuickTime Movie from the Export pop-up, click Options, click Settings, set the Quality slider to your preference, enter your framerate (15 or 30 fps) in the Frames Per Second field, and click OK. Then click Size, enter your desired dimensions in the Width and Height fields (use 640 by 480 for TV viewing, 320 by 240 for desktop), click OK, and click Save—then compare your masterpiece with ours, Lamp Dance.mov, on the Disc.

To compress our movie for CD-ROM play, we used the Sorenson Video 3 codec at Best quality and sized the movie down to 320 by 240 resolution.

After six hours...of shooting...Kris Fong...has failed to figure out...how to make...the transition...back to...real time.

Send Cell-Phone Text Messages from Your Mac (EASY)

by Chris Barylick and Kris Fong

WHAT YOU NEED

Mac OS 10.3 ($129, www.apple.com)

Daniel Browne's Address Book SMS Scripts 1.1 ($5, http://home.earthlink.net/~dwbrowne)

One of the following: any email app with an active account, iChat AV 2.0 or later ($29.95 or free with Mac OS 10.3) with .Mac or AIM account, AIM 4.6 or later (free, www.aim.com)

E mail. Instant messaging. Pagers. Cell phones. Today's technology enables all of us social creatures to, well, stay social no matter where we are (though we'd make exceptions at the movies or on a date). But you and your buddy needn't have the same type of communication device to chat. With a set of scripts and our handy guide, you can text-chat via iChat, any email app, or AOL Instant Messenger
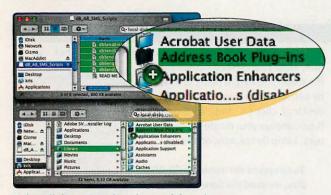
ON THE DISC
Address Book SMS Scripts 1.10

(AIM), with anyone who has a cell phone and any carrier that supports SMS (Short Message Service) text messaging. And you can start up a chat right from Address Book. Here's how.

Keep phone conversations silent. With a handy set of scripts, Macs can talk to cell phones and vice versa via text chat.

1 Install the Scripts

Find the DB Address Book SMS Scripts disk image on the Disc or download it from the Web. Double-click the .dmg file to mount the image's set of five scripts. To install the scripts, go to Users > *user name* > Library > Address Book Plug-ins, and drag the five scripts into the Address Book Plug-ins folder. If you currently keep all your contacts in Address Book, launch the app and skip ahead to step 3. If not, read on.

To install the scripts, just drag and drop them all into your Address Book Plug-Ins folder.

2 Import Contacts into Address Book

If you're not currently an Address Book user, become one. You can easily import contacts from Microsoft Entourage or Outlook Express, Palm Desktop, Qualcomm Eudora, Claris Emailer, or Netscape via AppleScript. To import your VIPs into Address Book, launch the Import Addresses script (Library > Scripts > Address Book Scripts). In the Script Editor interface, click Run. In the resulting dialog, choose the application whose contacts you want to import and click OK; Address Book launches and begins sucking in all your data. This may take a while to finish, depending on how popular you are.

Not an Address Book user? You can easily import all your VIPs from another app via the Import Addresses script.

3 Make It Mobile

Now prep Address Book. For everyone to whom you want to be able to send a text message, make sure the cell-phone number appears in the appropriate field—Mobile, Pager, or Other. To edit a card, select a name from the Name column and click Edit at the bottom of the window. If a cell number currently appears but is in the wrong field (say it's designated as Home or Work), click the field name and select Mobile from the pop-up menu. To add a cell number to an existing card, click the green plus sign (+) next to the phone section, select Mobile from the field name pop-up menu, and type the cell-phone number in the field. For all cell numbers, do *not* type the number 1 before the area code or the script will fail. Once you've modified all the desired cards, press Command-S to save your changes, close Address Book, and then open it again.

Place all cell-phone numbers in the Mobile category field, though Pager and Other will work too.

4 Chat Away

Select the name of someone to whom you want to send a text message. In the address card pane, Control-click the cell-phone listing and select Send SMS Message Via iChat from the contextual menu (or choose to send a text message via email or AIM). iChat launches if that's what you have selected; otherwise, either your default email app (once you choose your friend's cell-phone carrier company from the dialog that appears) or AIM launches. Your buddy's cell-phone number appears as the addressee in your chosen app—in iChat, click OK to confirm the number. Then compose a message as usual (keep it under 160 characters), and press Return (or click Send or the like if you're using email) to launch it into cyberspace and subsequently to your friend's phone.

To start a chat, just Control-click any Address Book cell-phone number and choose a method from the menu.

Chris Barylick hopes that the radiation from his new cell phone will allow him to shoot lasers from his eyes 20 years from now.

Customize the Finder Toolbar EASY

by Kris Fong

WHAT YOU NEED

Any Mac running OS X

When it comes to Finder windows, some of you are hard-core GUI tweak freaks, while others want to see straight-to-the-point, literal directives. Whether you're one of these two extremes or something in between, at least it's good to know you won't break a sweat if ever you have a notion to customize your Finder-window toolbar.

The secret to adding toolbar controls lies with the Control key.

1 The Simple Makeover

Double-click your hard drive icon to open a Finder window. Then Control-click any toolbar button at the top of the window to display the contextual menu. If you're satisfied with what controls currently appear in your window (in Panther, the defaults are the back and forward buttons, the view selector, the action button, and the search box), you can choose to display them as Icon & Text, Icon Only, or Text Only. Choose one (such as Text Only) to change the look of all Finder windows. You can also choose Use Small Icons And Text to make these controls a little—and we mean a *little*—smaller.
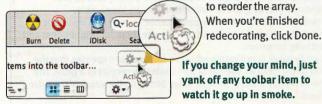
Hate pretty pics? Display Finder controls in the literal sense by selecting Text Only from the contextual menu.

2 The Full-On Swan

If you really like a multitude of choices, select Customize Toolbar from the contextual menu. A panel slides down, displaying a full smorgasbord of tools you can add to the toolbar, including buttons to eject things, burn things, and delete things. Just drag any item into the toolbar anywhere you want—the existing items will sidestep to make room if you want to squeeze something in between them. If you want to remove something, just drag it off the toolbar and *poof,* it's gone. Drag any toolbar item left or right to reorder the array. When you're finished redecorating, click Done.

If you change your mind, just yank off any toolbar item to watch it go up in smoke.

CONTEST RULES

Contestants can submit entries by uploading tracks to www. macaddict.com/GarageBandContest or www.guitarworld.com/ GarageBandContest. Alternately, contestants can burn tracks or GarageBand projects to CD, and mail them to the addresses listed above. For the Pro Contest, songs lasting 1 minute or less must be submitted as an MP3 file. For the Amateur Contest, songs 1 minute or shorter must be submitted as an archived GarageBand project, using only unedited Apple Loops from Apple's GarageBand and GarageBand Jam Pack products.

Only one entry per contestant. Contestants can either the Pro *or* the Amateur Contest but not both.

The Pro Contest winner will receive M-Audio's FireWire 410, Studiphile BX5, Solaris, Oxygen 8, and Studio Pack, plus LaCie's 500GB Big Disk. The Amateur Contest winner will receive M-Audio's Mobile Pre USB, Studiophile LX4 2.1, Keystation 49e, and Luna, plus LaCie's 500GB Big Disk.

Entries will for the Pro Contest will be judged based on production quality (50%), originality (25%), and song construction (25%). Entries for the Amateur Contest will be judged based upon uniqueness (50%) and song construction (50%). Entries containing sampled music for which contestants do not own full copyright will be immediately disqualified.

No purchase necessary to win. Entries must be received no later than July 31, 2004. Future Network will not be responsible for late, lost, mutilated, illegible, incomplete, or misdirected entries. Contestants are required to submit only one entry to be eligible. Winners will be judged based on the criteria stated above. *MacAddict* editors, *Guitar World* editors, and Joe Satriani will be the sole judges and their decisions will be final. No minimum number of entries shall be required. Odds of winning will depend on the number of entries received. The total number of contestants likely to participate is not known.

The winner will be announced on or around January 2005 in *MacAddict* and *Guitar World* magazines. The winner will also be notified directly. The name of the winner may be obtained by sending a stamped, self-addressed envelope to Future Network, Inc., Attn: GarageBand Contest, 150 North Hill Drive, Brisbane, CA 94005. Prizes are nontransferable and no substitutions will be permitted.

This contest is open to residents of the United States only. Void where prohibited by law. Void in Arizona, Maryland, Vermont and Puerto Rico. The return of any prize notification as undeliverable will result in disqualification and an alternate winner will be selected. If the winner is a minor, the prize will be awarded to his or her parent or legal guardian. The winner may be required to sign an affidavit of eligibility/release of liability/prize acceptance within seven days of receipt of prize notification or forfeit his or her prize. By acceptance of the prize, the winner agrees to the use of his or her name and/or likeness for purposes of advertising, trade or promotion by Future Network without further compensation, unless prohibited by law. Employees of Future Network, LaCie, Peavey, Ibanez and M-Audio are not eligible to participate.

Entries will not be returned, and Future Network shall not be responsible for doing so.

If more than one person works on an entry, the person who submits the entry will be the "leader" of that group. Any and all prizes will be sent to that person, and he or she will determine the distribution of any and all prizes to the other members. Any disputes that arise over the distribution of said prizes will be resolved by the group involved. Neither Future Network nor any of its employees will be responsible for any conflicts, or act as mediator in such conflicts. If a conflict arises prior to end of the contest, Future Network reserves the right to disqualify that entry.

As a condition to be eligible to participate in the contest, the contestants hereby grant to Future Network an irrevocable, nonexclusive, worldwide, fully paid license to copy and distribute their entries, in whole or in part, and to use them for promotional and advertising purposes.

Future Network is not responsible for damages or expenses that the winner might incur as a result of this contest or receipt of a prize. The winner is responsible for income taxes based on the value of the prize received.

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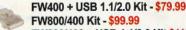
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MA08-04

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tell us how you really feel

LETTERS

DIY LOOPS

Many, many thanks for the tutorial "Make Your Own Apple Loops," (Jun/04, p68), which showed how to use AppleLoops SDK. Question: Can I create an Apple Loop from prerecorded music? —*Jay Kahn*

Yes, you can create a loop from a CD or an MP3. Drag the file into GarageBand's timeline, and if needed, GarageBand will convert the file to AIFF. Next, use the Edit > Split command to crop to the section of the file you want to use. Then, follow the rest of the instructions in the "Make Your Own Apple Loops" how-to to create the loop. Note: You need to determine the key and tempo of your chosen song to create the loop tags.—*Max*
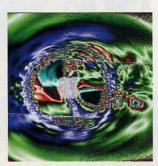
MAC MUSIC SITE

I enjoyed the home-studio section of your terrific feature article "Be Your Own Band" (May/04, p30). Here's another tip for your readers: Check out MacMusic.org (www.macmusic.org)—the oldest, largest, and most comprehensive Web site for Mac musicians. A volunteer-driven site, MacMusic posts Mac-specific music news several times daily, offers an extensive list of links to

other music and Mac sites, and provides information on music-specific software upgrades.—*Peter Kirn, editor-in-chief of English content, MacMusic.org* Consider yourself plugged. —*Max*

B BACK THE APPLE

I just finished reading the "Make iTunes Your Own" section of "79 Power Tips" (Jun/04, p18) and thought of another keyboard command that's great for impressing friends. Although an Apple logo appears when you first turn on the Visualizer, it soon fades away—but hitting the B key while the
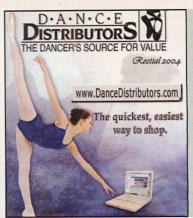

The B key brings back the Apple.

iTunes Visualizer is running (Visualizer > Turn Visualizer On) will bring up a translucent Apple logo in the center of the screen.—*Andrew Seidl*

YES ON PLUG-INS

I read in "Unlock Your iLife" (May/04, p16) that GarageBand does not

support third-party plug-ins. GarageBand, in fact, supports Apple's AudioUnits (AU) plug-in standard, so using plug-ins is indeed very simple.—*Jan Noponen* Shortly after the issue went to press, we discovered that you could use third-party AU plug-ins—although neither Apple nor GarageBand's Help menu makes mention of third-party support. To install AU plug-ins, simply drag them to the Library > Audio > Plug-Ins > Components folder.—*Max*

SOUND OF SILENCE

In the July 2004 *Ask Us* section (p64), you said there was no way to change the startup chime. You can, however, silence it with the Startup Chime Stopper utility, downloadable from Apple's Web site (www.apple .com/downloads/macosx /system_disk_utilities

RECENTLY SIGHTED

Dancers are Mac addicts too.—*Ben*

/startupchimestopper .html).—*Aucun Bruit*

VIEW AVI IN QUICKTIME

In the July 2004 *Ask Us* (p62), you say that QuickTime can't play AVI-formatted video. Sure you can! I enabled the player to run AVI files in QuickTime Player >

Enable QuickTime to view a wider variety of moving- and still-graphic formats.

Preferences > QuickTime Preferences. Click the Plug-In tab, then click the MIME Settings button at the bottom of the preference pane. Click the disclosure triangle next to the Video check box, then check the box that says Video For Windows (AVI) File in the

---

Survey Says

Here are the results of our April 2004 survey. Go to www.macaddict.com each month for a new online poll.

Apple Computer and the Beatles' record company, Apple Corps, are still fighting over the use of the Apple trademark where music is concerned. Who's right?

52% Apple Computer. So long as Apple Computer doesn't make music, the trademark's use with iTunes is legit.

2% I prefer pears.

5% Apple Corps. Apple Computer is dealing in music, even if it's only online music. That's Beatles' territory.

6% I'm not sure. They both seem to have a point.

35% Who cares? Do you see the Washington Apple Commission complaining?

2,163 respondents

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list that appears.
—Winston Kellogg

DRAC'S SHACK

In "Van Helsing: Monsters, Magic, and Macs" (June/04, p38), the matte painting of Dracula's castle was created by us at Illusion Arts. We designed and created over 130 3D and 2D building and environment shots

for the show, supervised by my partner, Syd Dutton. We worked closely with Industrial Light + Magic and supplied elements that were incorporated into some of their shots as well.
—Bill Taylor ASC, co-owner Illusion Arts

Bill and Syd are proof that not all Mac magic comes from ILM.—*Max*

The folks at Illusion Arts created the castle painting for this composition.

SCHOOLHOUSES THAT ROCK

In our May 2004 issue (p94), we gave props to a school that made liberal and effective use of Macs. Apparently, that school isn't alone.

The Original

Henrico County Public Schools (Richmond, VA) began its Teaching and Learning Initiative three years ago by giving every student in every middle and high school an iBook and installing wireless networks in every classroom. We've got 23,000 Mac addicts here in Henrico. Go to www.saveouribooks.com for more information on the successes of the Henrico County iBook program.
—saveouribooks

Henrico County, in collaboration with Apple, pioneered the one-iBook-per-student concept for junior-high and high-school public school students.
—Max

Get Back To Bio!

Let me tell you about our new computer lab. We've got 12 Power Mac G5s with 17-inch Cinema Displays. We also have an AirPort network set up in the other wing of the school. When biology class gets really boring, I can surf the MacAddict Forums.
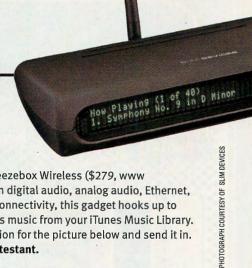*—Edward*

But Do You Have A Partridge in Your Pear Tree?

My school has five eMac labs, five iMac DV labs, and two iMac labs. The best part: the servers. My school has seven servers: three original Xserves, two slot-loading Xserves, one cluster node, and one Xserve RAID.
—Brian Kaempen

WIN!

Win a Squeezebox Wireless

Win Slim Devices' Squeezebox Wireless ($279, www.slimdevices.com). With digital audio, analog audio, Ethernet, and 802.11b wireless connectivity, this gadget hooks up to your stereo and streams music from your iTunes Music Library. Just write the best caption for the picture below and send it in. **Only one entry per contestant.**

Entry Form

Write a caption for this picture.

CONTESTANT INFORMATION

Full Name:

Address:

City: State:

Zip:

Email or telephone:

Send snail-mail entries to: Squeezebox Contest
MacAddict **magazine, 150 North Hill Dr., Brisbane, CA 94005.**
Send email entries to: contest@macaddict.com with the subject: Squeezebox Contest
Deadline for entry: August 31, 2004.
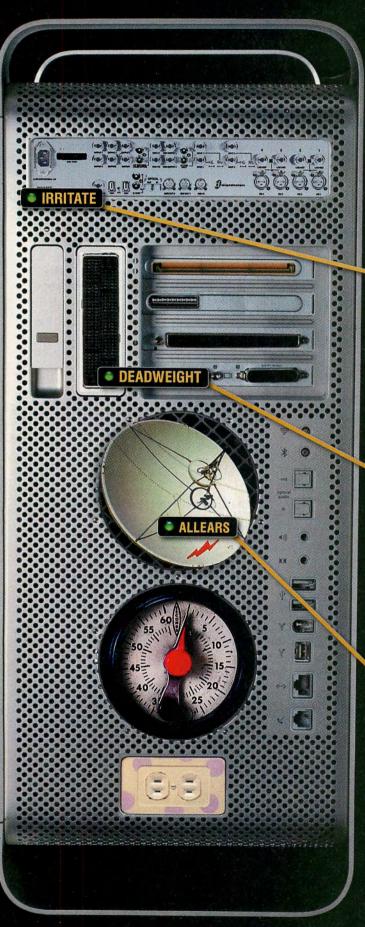**Contest results will appear in our Dec/04 issue.**

Contest Rules The judges will be *MacAddict* editors and will base their decision on 33 percent humor, 33 percent originality, and 33 percent creativity. All entries must be received no later than August 31, 2004, with the winner announced around December 2004. By entering this contest, you agree that Future Network USA may use your name, likeness, and Web site for promotional purposes without further payment. All prizes will be awarded, and no minimum number of entries is required. Prizes won by minors will be awarded to their parents or legal guardians. Future Network USA is not responsible for damages or expenses the winners might incur as a result of this contest or the receipt of a prize, and winners are responsible for income taxes based on the value of the prize received. A list of winners may also be obtained by sending a stamped, self-addressed envelope to Future Network USA c/o *MacAddict* Contest, 150 North Hill Dr., Brisbane, CA 94005. This contest is limited to residents of the United States. No purchase necessary, void in Arizona, Maryland, Vermont, Puerto Rico, and where prohibited by law.

Winner!

Congratulations to Michael Ray, who won the Avid Mojo portable nonlinear accelerator ($1,695, www.avid.com), Avid Xpress Pro video-editing software ($1,695), and Digidesign's Mbox USB audio production system ($449 street, www.digidesign.com).

Rock me, iMac Deus.

REJECTED PORTS

Before settling on the Mac's current industry-standard ports, Apple wasted millions investigating a plethora of proprietary schemes. A recently laid-off I/O engineer smuggled plans for the following failed designs out of the labs of Cupertino and shared them with us. FireWire and USB never looked so good.

IRRITATE

DEADWEIGHT

ALLEARS

Infinitely Reconfigurable and Reassignable Interconnected Translator and Teleconferencing Enabler
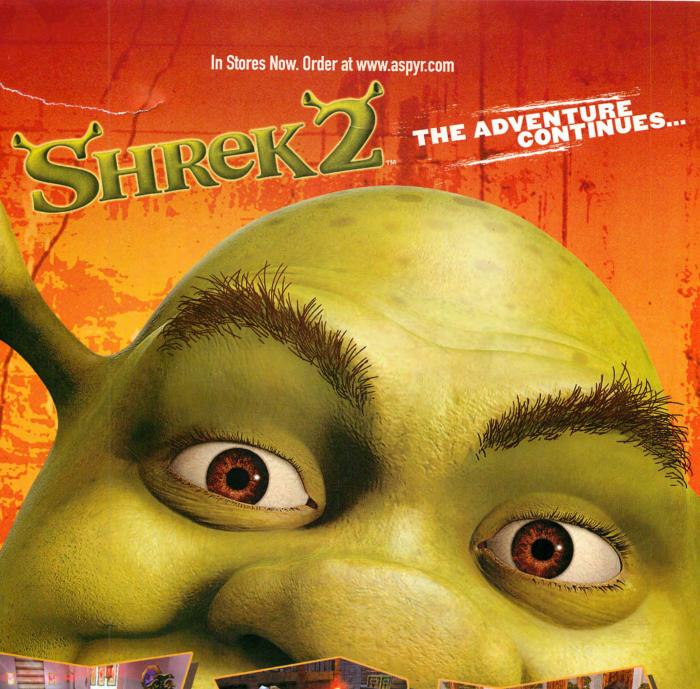
Users could reconfigure the IRRITATE's pins through a user interface based on a Battleship-style matrix (B-4, E-9, and so forth), which controlled physical connectors moved by a series of tiny pneumatic tubes (not shown). Unfortunately, the air pressure needed to operate the pneumatic actuators required an air compressor louder than the fans on the original Mirrored Drive Door Power Mac G4.

Digitally Enabled Apparatus Determining Which Encoded Inputs Garner High Throughput

Apple intended this to be the port to end all ports. With 1,660 pins whose software-customizable signals could be configured to connect to any peripheral, DEADWEIGHT occupied the lion's share of the Mac's back panel. In testing, however, the 4-inch-diameter cable was prone to dragging Macs off tables and injuring small pets. Also, installation often led to inflammation of the extensor carpi ulnaris and occasional compound fractures.

Asynchronous Lenticularly Latticed Enhanced-Access Radio System

This miniature dish, known during development by the code name AirPort Ludicrous, was designed to accommodate all wireless-communication signals, including 802.11a, b, and g; Bluetooth; AM, FM, satellite (XM and Sirius), shortwave, and ham radio; UHF, VHF, and HDTV (NTSC, PAL, and SECAM); plus, in a sop to aging truckers, CB. Unfortunately, the fast-rotating, 3.5-inch-diameter device was characterized by a high-pitched squealing that emitted from its tiny ball bearings, driving some testers stark raving mad.

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